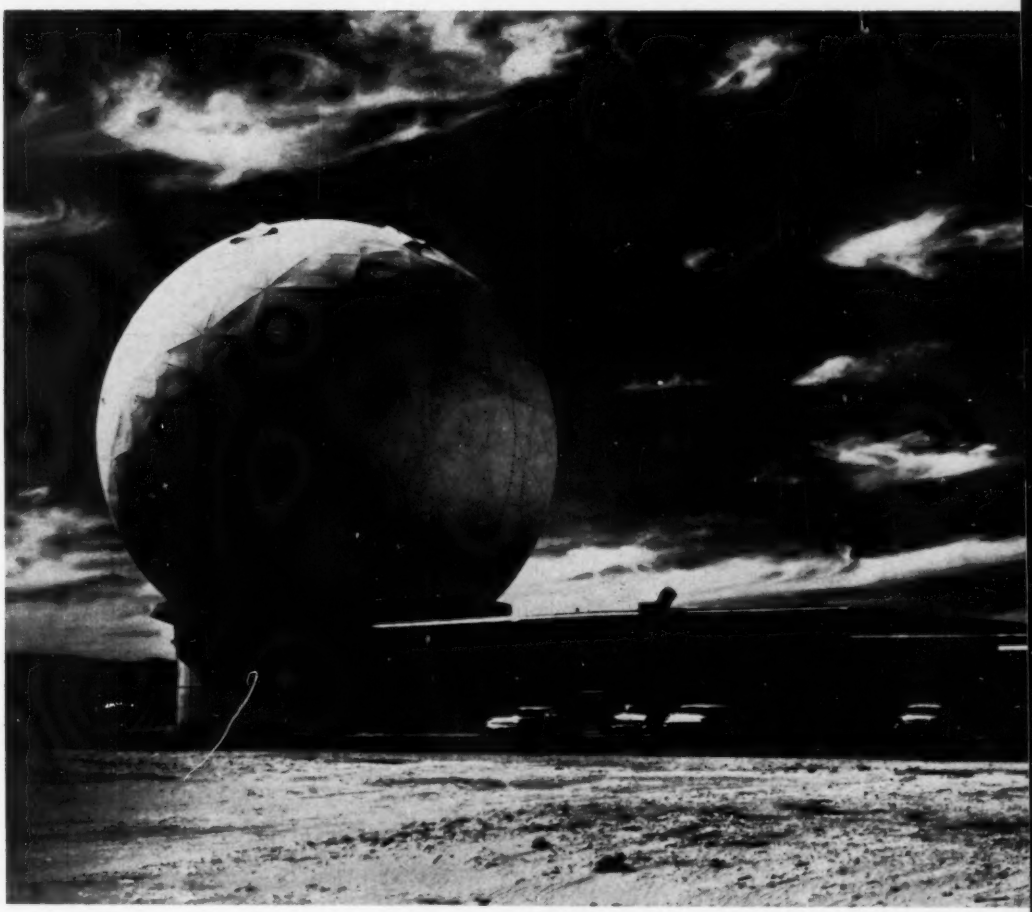
December 9, 1961
Vol. 161 — No. 24

# Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY



The inner workings of this giant "golf ball", a Bell Labs' Acquisition Radar and a vital part of Nike-Zeus anti-missile network, are used to simulate disorientation encountered by astronauts tumbling in space craft, manned satellites and space stations. Story: p. 46.

Circulation This Issue
14,434 of Which
13,878 Is Paid

MANAGEMENT · PLANT · TRAFFIC · COMMERCIAL · LEGAL · ACCOUNTING

# "Our customer wanted certain new features which only the Stromberg-Carlson® F-50 provides"

AL NIXON, VICE PRESIDENT & GENERAL MANAGER
CHAUTAUQUA & ERIE TELEPHONE COMPANY, WESTFIELD, N. Y.

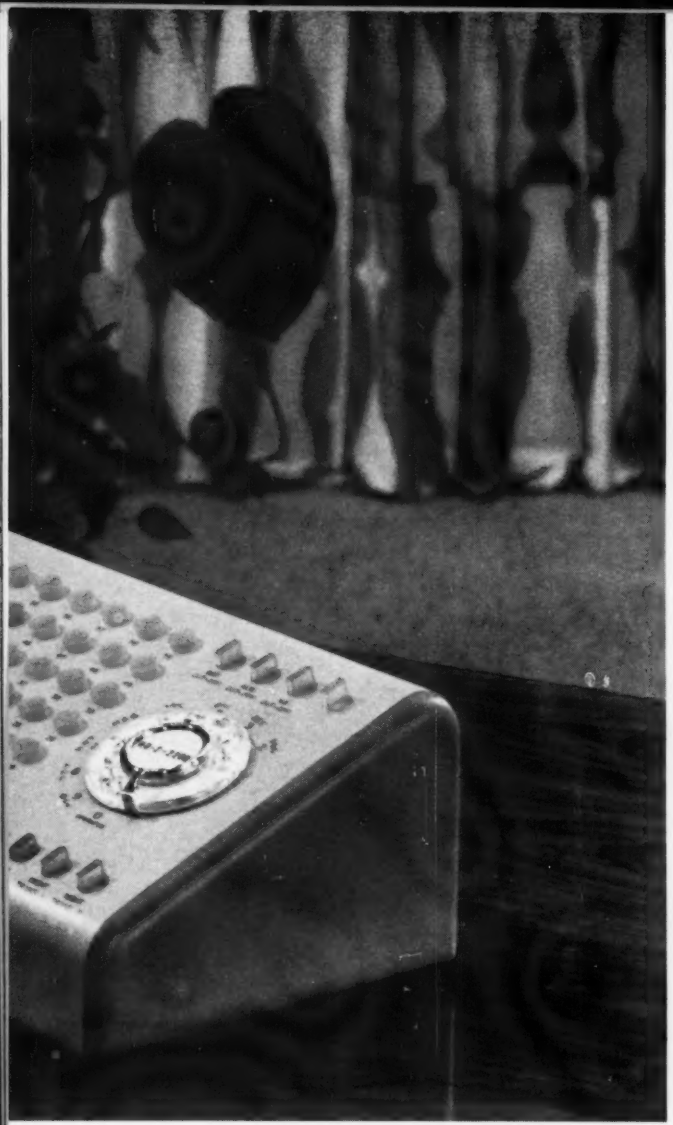
The Kling Furniture Company is growing; so are its inside and outside communications.

For example: there's a great deal of inter- and intra-plant switching of calls on local, short-haul and long distance facilities. Urgent messages to be handled and transferred after normal working hours. Fast decisions to be made which involve a number of people. Code-call requirements for locating those whose jobs keep them on the move.

To meet these needs (plus a few "custom-tailored" services worked out in consultation with the subscriber), the Chautauqua & Erie Telephone Company installed a Stromberg-Carlson F-50 PBX with its exclusive "TOUCH-LITE"* Turret. The reactions were gratifying. These comments were typical:

"It just doesn't seem right for my job to be so easy," said Mrs. Miller, the attendant, impressed

*Stromberg-Carlson trademark



Available in gray, green or beige, the "TOUCH-LITE" Turret is a handsome, compact addition to any kind of office. Keys light up at a feather-light touch to accomplish transfer and supervision of calls. Capacity of the system is 50 lines, 10 trunks, 6 links.

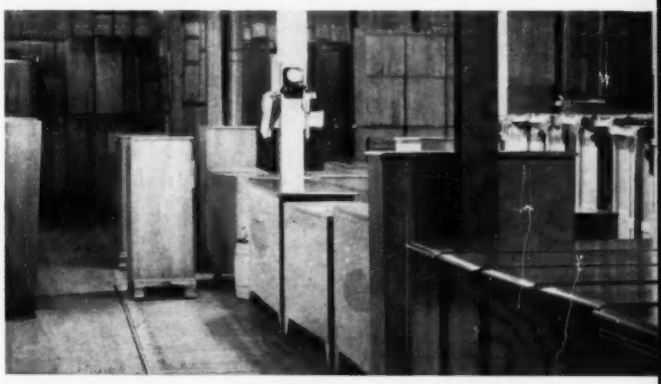
by the operating speed and simplicity of the turret and the feather-light touch required on the illuminating keys.

According to Don Kling, "This switchboard has already improved our telephone service greatly. When we complete our new offices and are able to use all the features we know are available, it will really be wonderful."

Your business subscribers will react the same way, and we're ready to help you sell them. Contact your Stromberg-Carlson representative now. In Atlanta, call: 875-7467; Chicago: STate 2-4235; Kansas City: HArrison 1-6618; Rochester: HUbbard 2-2200; San Francisco: OXford 7-3630.

Telephones in the Kling Furniture plant are strategically located in the shop as well as in the offices. Illustrated is a 1574-W phone with transfer push key.

Chester Helgran (seated) of Kling gave valuable advice and assistance on the F-50 installation to (left to right, standing) Rod Nixon, Floyd Berlin and Al Nixon of Chautauqua & Erie Telephone Company.



Fast, efficient telephone communications connect all areas of the Kling plant, including this warehouse area.

GENERAL DYNAMICS
TELECOMMUNICATION

# FLASHES AND PLUGS

**SQUARE PEG IN A ROUND HOLE.** Agnes Ressler, General Telephone Co. of Pennsylvania operator at Johnstown, ran into some trouble in handling a paystation call recently.

It seems she asked the calling party to deposit $1.00 but got no response. She then again requested $1.00.

The voice on the other end sounded frustrated. "I can't get the money in."

"Are you putting it in the right slot?" asked Agnes.

"Operator," said the subscriber, "I have folded this dollar as small as I can and it won't fit any of the slots!"

•

**SANTA SPOTTER.** Six years ago a Colorado Springs, Colo. youngster calling Santa Claus dialed a wrong number and the Christmas tradition of tracking Santa by radar was born.

The child, using a call-direct-to-Santa service provided by a local Sears Roebuck store, dialed one digit incorrectly and got an unlisted number at the combat operation center of the North American Air Defense Command. Instead of Mr. Claus answering, the voice on the other end was U.S. Air Force Col. Harry Shoup.

Colonel Shoup was then COC director and now is vice-commander of the Bangor NORAD sector.

At first when he was asked if he was one of Santa's helpers, he was inclined to think that one of his crew was playing a trick on him. However, he recovered his equilibrium, and impressed by the childish innocence, answered: "I'm no helper—I AM Santa Claus."

In the long conversation following, the young one gave Santa Shoup a Christmas list.

This encounter with the holiday spirit got the colonel thinking, and with his help the tradition of tracking Santa was born.

He decided that no one would mind if the men who must listen for danger signals of a potential enemy also listened for sleighbells.

The first sleigh-and-reindeer track is registered on the radar scope about noon on Dec. 24, and a gong sounds to indicate an "unidentified air object" in NORAD territory.

As the track develops, the world's news agencies report that the object has been identified as Santa Claus.

•

**SATAN OR SANTA?** Children have a way of interpreting things in their own inimitable fashion, as witness this telephone conversation between two little girls in the same Sunday school class.

"Do you believe there is a devil?" asked one.

"No," replied the other, "of course not. It's just like Santa Claus. He's your father."

•

**"LONG ARM" OF TELEPHONE.** The convict had escaped from prison after many years there, but his freedom was short-lived.

In a diner, where he ordered a cup of coffee, he tossed out a dime to pay for it and said he'd make a telephone call with the change.

**Change of Address**

**Please notify your local postmaster and the Circulation Department of TELEPHONY (608 S. Dearborn St., Chicago 5, Ill.) of change of address. Change cannot be made without the old as well as the new address. Allow three weeks for change of address to become effective.**


# *Telephony*

**THE JOURNAL OF THE TELEPHONE INDUSTRY**

*1901 — 60 years — 1961*

**December 9, 1961**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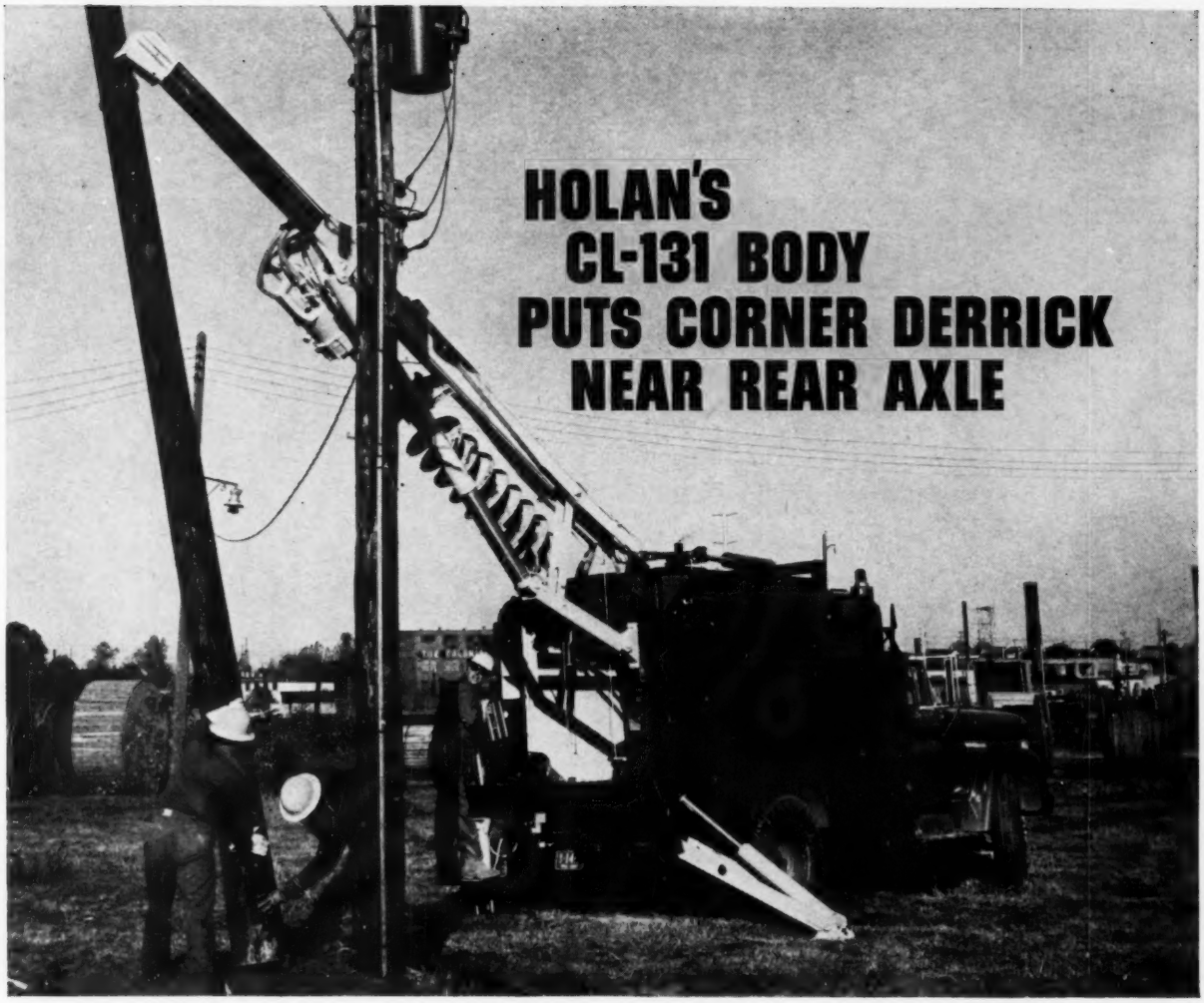


# HOLAN'S CL-131 BODY PUTS CORNER DERRICK NEAR REAR AXLE

## New Unit Mounts on 84" Chassis, Yet Stable Enough for Pole "Walking"

Holan's new CL-131 Body/7500 Corner Derrick Unit is a husky little heavyweight.

Short and compact, the body mounts on an 84" CA chassis — and the centerline of derrick rotation is less than 44" from the centerline of the rear axle. By "bobbing" off the rear, the center of gravity automatically shifts forward, making it possible to handle heavy derrick work with or without use of the hydraulic stabilizer jack.

In fact, long and hefty poles can be "walked" to position with the unit, set and aligned without use of pike poles.

And the compartmentation is ideal for light line construction or maintenance. On the right side, there are shelves with adjustable partitions, compartments for ropes and climber belts, a water cask, a thru box for long tools, a crosscut saw holder, and a rubber goods box in the superstructure that opens to the inside of the body.

On the left side, there is a horizontal compartment with drop doors and full-length shelf partitioned for miscellaneous equipment. And there's a left-hand lower box for heavy tools.

Here is a compact workhorse of a unit . . . one that will save time, maneuver easily and do a multitude of line construction and maintenance tasks. Call your Holan Field Representative . . . or write us today . . . for complete information.

"Walking" a pole is an easy task for Holan's CL-131/7500 Corner Derrick Unit which mounts on an 84" CA chassis.

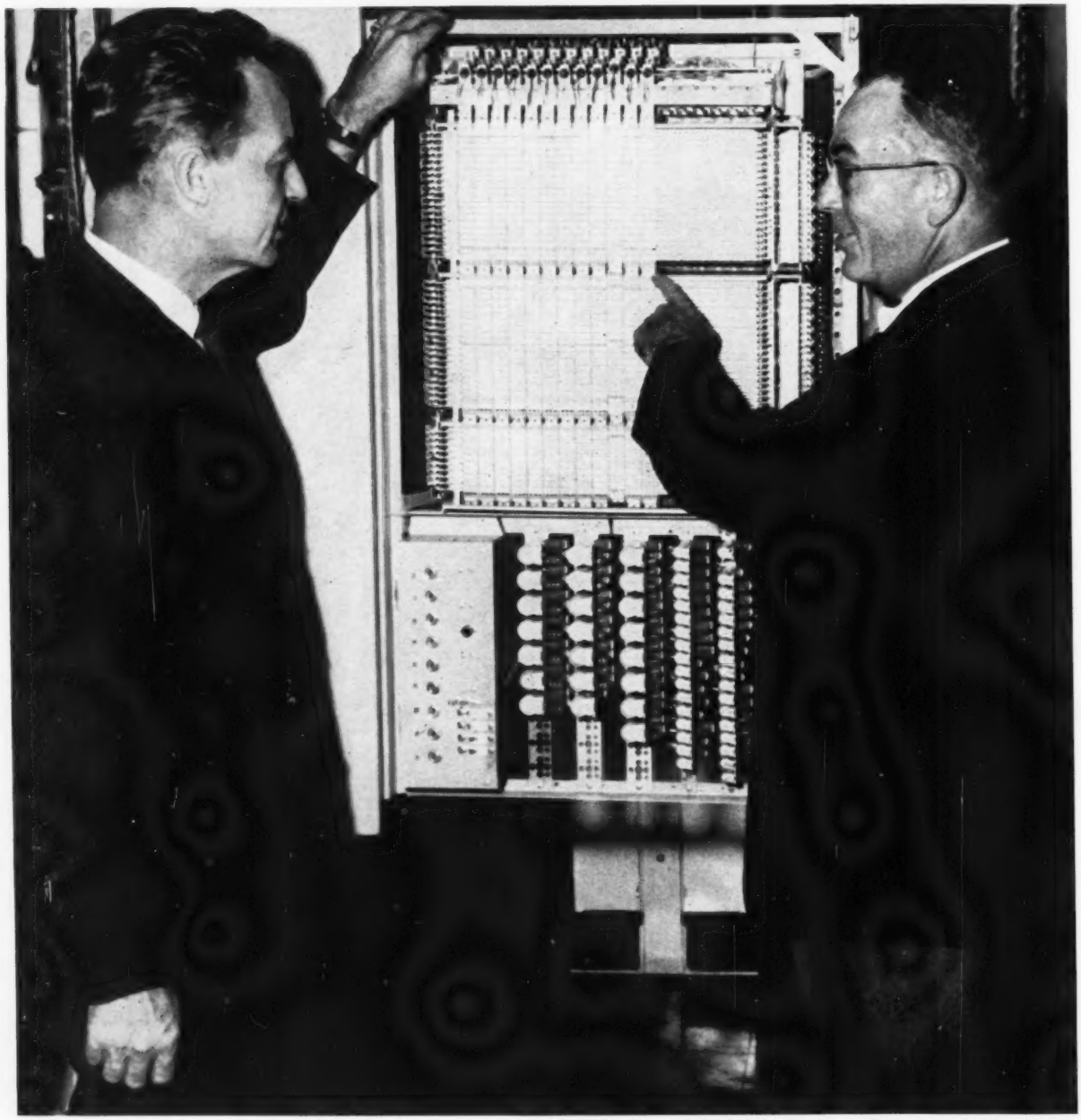
Holan Corporation, 4100 West 150th Street, Cleveland 35, Ohio

Holan

Subsidiary of THE OHIO BRASS COMPANY

HOLAN

# "WE SAVED



Exchange Unit for Leich Line Concentrator. Shown are (left to right)
J. H. Shultz, General Manager and Arthur F. Brubaker,
Plant Superintendent, Rochester (Ind.) Telephone Co., Inc.

LEICH
GENERAL SYSTEMS
Subsidiary of
GENERAL TELEPHONE & ELECTRONICS

# $12,000 WITH LEICH'S LINE CONCENTRATOR"

*REPORTS MR. ARTHUR F. BRUBAKER, PLANT SUPERINTENDENT*
*ROCHESTER TELEPHONE COMPANY, INC., ROCHESTER, INDIANA*

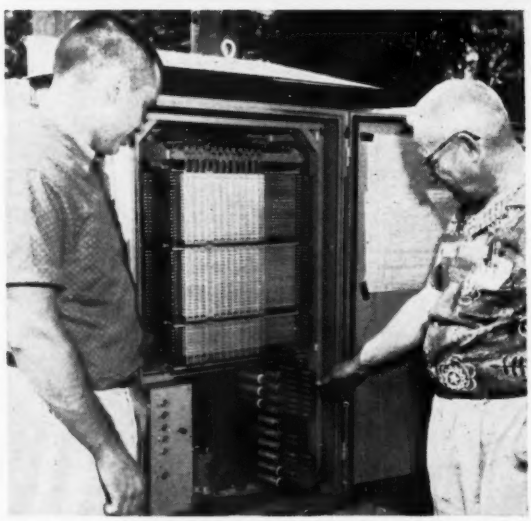
"By installing Leich's Line Concentrator instead of cable, we saved $12,000!" reports Mr. Arthur F. Brubaker. "We were able to add lines for new subscribers and reduce the number of subscribers per line at a cost much lower than cable relief."

The cost-cutting story: Mr. Brubaker needed more circuits in an area northeast of Rochester, Indiana. Since 24 pair of the existing 26 pair cable were in use, he would normally have had to add another 26 pair cable at a cost of about $17,000.

The *installed* cost of a 49-12-3AZ Leich Line Concentrator, including weatherproof cabinet for the subscriber unit, was only $5,000. Instead of serving each line over a separate wire pair, it concentrates a number of subscriber lines over a much smaller "high usage" trunk group.

It used 15 pairs (12 traffic trunks and 3 control trunks) of the existing 26 pair cable to furnish 49 lines—28 in service and 21 available for future growth. Four of the remaining original eleven pairs were used as high usage lines in the area, leaving seven spare pairs. Mr. Brubaker increased his original 26 lines to a total of 60—for a net gain of 34 lines!

You can benefit with Leich's Line Concentrator, too. To learn how, just send in the coupon.



Pole-mounted Subscriber Unit for Leich Line Concentrator.

**FREE 12-page catalog of FACTS AND FIGURES**

**LEICH SALES CORPORATION**

**427 West Randolph Street, Chicago 6, Illinois**

Please send me____copies of "The Leich Line Concentrator" catalog which includes typical applications, installation data, principles of operation, and ordering information.

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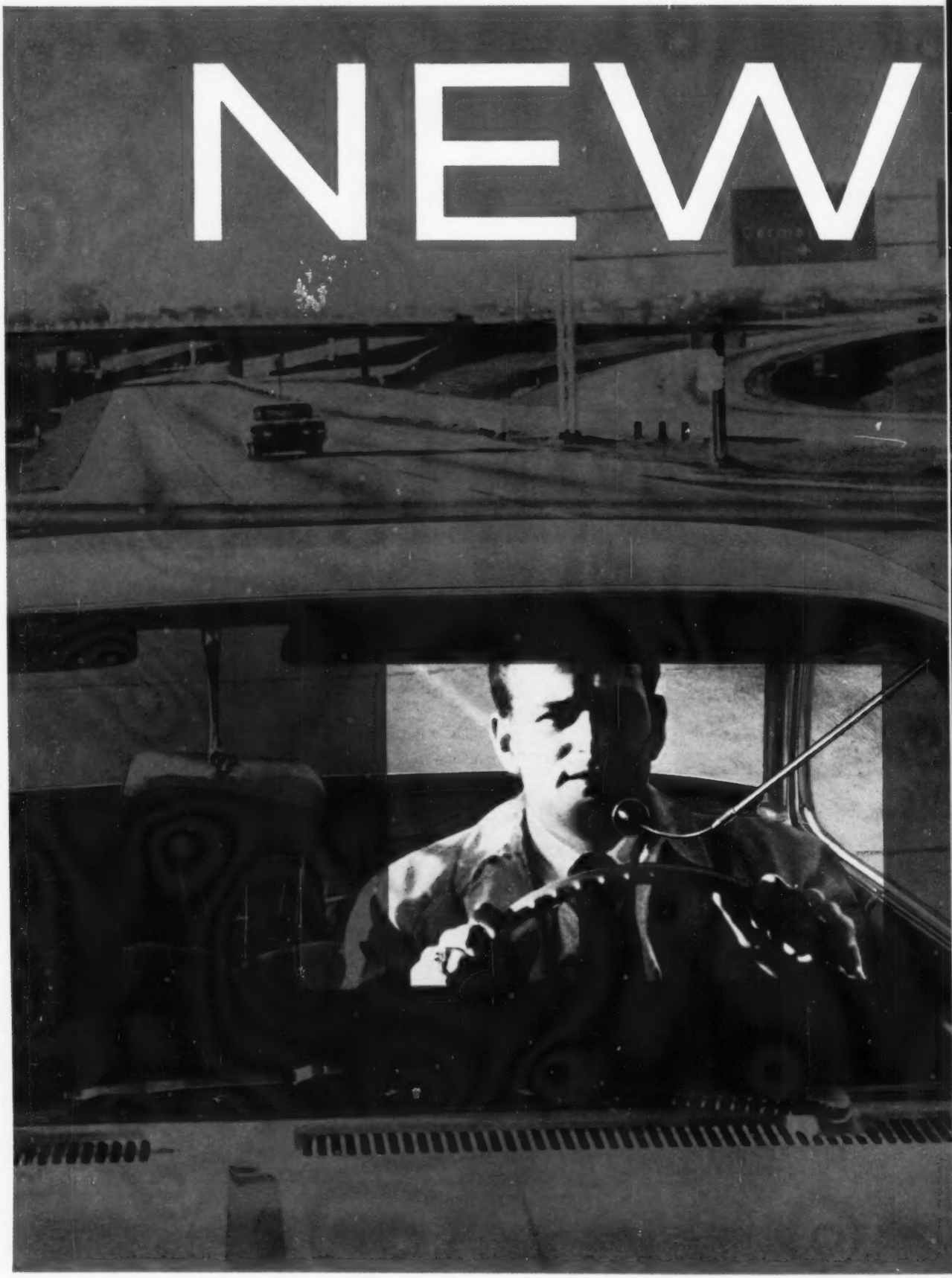
**manufacturers of telephones, switchboards and related apparatus since 1907**

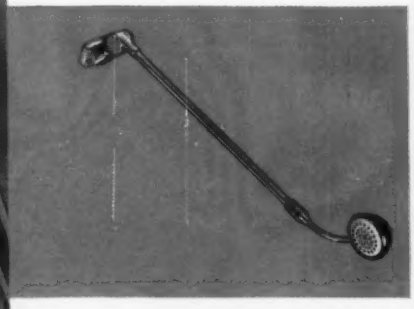

NEW

# SAFETY DESIGNED *"HANDS-FREE"*!
# NOW TALK AS YOU DRIVE!

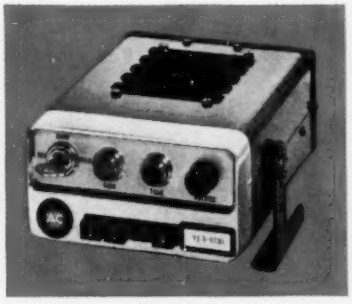
AChieverfone—a product of AC-Milwaukee Research—introduces a new idea in mobile telephones . . . an idea that makes it safe and easy to talk while driving. A new boom-mounted microphone, push-to-talk foot switch, and built-in speaker make "HANDS-FREE" the most modern method of efficient mobile communications. Now the driver keeps his hands where they belong—on the steering wheel.

No matter where your customer drives, with a car telephone he can call anyone, anywhere. He is in constant contact with his office, customers, suppliers, and home. And now he can telephone safely . . . with his hands at the wheel.

The "HANDS-FREE" system is simple to operate and offers 4-channel selection. Proven thoroughly reliable for trouble-free service, "HANDS-FREE" is unmatched in the market. Write Box 622, Milwaukee, Wisconsin, or call AC-Milwaukee for more information.



Boom-mounted microphone swings up and out of the way when not in use . . . swings down for talking.



Compact control unit contains speaker for incoming voice and has 4-channel push-button capability.

Push-to-talk switch is easy to operate. All it takes is just a tap of the toe—push to talk . . . release to listen.

# ACHIEVERFONE
# *"HANDS-FREE"*
# MOBILE TELEPHONE

*AC Spark Plug* *The Electronics Division of General Motors • Box 622 • Milwaukee 1, Wis. • Telephone: BRoadway 3-1120*

# Looking for a solution to your

### BRPE Tape Punch

Perforates 5, 6, 7 or 8 level tape at 100 char/sec. Synchronous unit, with parallel-wire input. For business machine readout, or, with deserializer, for data reception over DATA-PHONE or other high speed communication channels.

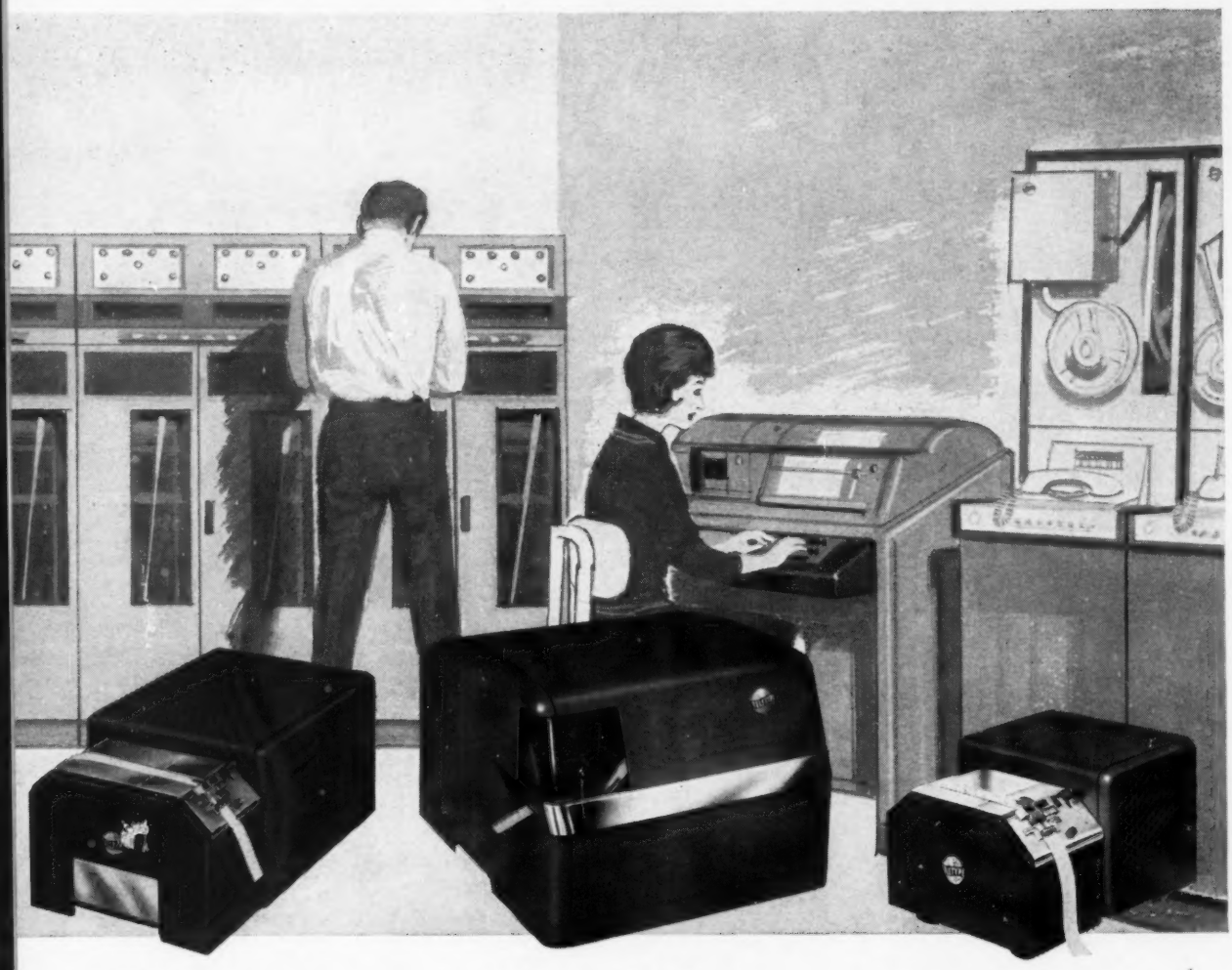
### CX Tape Reader

Reads fully perforated or chadless tape—5, 6, 7 or 8 level codes—at 100 char/sec. For use as computer input device, or, with serializer, for transmission over DATA-PHONE or other high speed communication channels.

### LARP Tape Punch

Produces 5, 6, 7 or 8 level tape at 20 char/sec. Parallel input. May be used for cross-office relaying, data collection, or providing by-product tapes from business machines. Companion input tape reader available (LX).

# data communication problems?



**LBXD Tape Reader**

Dual-purpose model: permits, (1) tape transmission on-line and/or to business machines, or (2) direct read-out (without tape) from business machines for on-line transmission. Speed, 10 char/sec; 5, 6, 7 or 8 level codes.

**LPR Typing Tape Punch**

Produces 5-level "common language tape," prints data right on tape for handling ease. Speed, 10 char/sec. Non-typing version of this unit also available (LRPE).

**LXD Tape Reader**

For on-line transmission of 5, 6, 7 or 8 level tape at 10 char/sec. Transmission may be pulsed.

Teletype Corporation offers an extensive line of paper tape punching and reading equipment, with capabilities for meeting a wide variety of needs. In addition to the individual units illustrated, numerous combination sets are available—such as gang-mounted punches and readers, punch-reader relay sets, high-low and low-high speed converters, and page-tape consoles.

Applications range from high or low speed on-line transmission to centralized data collection . . . data distribution . . . data input/output for business machines . . . by-product tapes . . . and many others.

With Teletype-built tape units, you can solve your problems with precision-engineered equipment, backed by over fifty years of continuous design and manufacturing skill in the data communications field.

Teletype equipment is manufactured for the Bell System and others who require the utmost reliability and versatility from their data communications systems. For further information, write to Teletype Corporation, Dept. 65M, 5555 Touhy Avenue, Skokie, Illinois.

**TELETYPE®**

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# A TRIP

# TO CHRISTMAS

*Friday, December 22, NBC-TV on the Bell Telephone Hour*

**JANE WYATT** *your hostess*

*Starring*

**JOHN RAITT · JANE MORGAN**

**THE LENNON SISTERS**

**LISA DELLA CASA**

*and the Schola Cantorum*

**VIOLETTE VERDY · EDWARD VILLELLA**

**DONALD VOORHEES**

*and the Bell Telephone Orchestra*

A delightful holiday program awaits you on December 22nd when the Bell Telephone Hour takes "A Trip to Christmas."

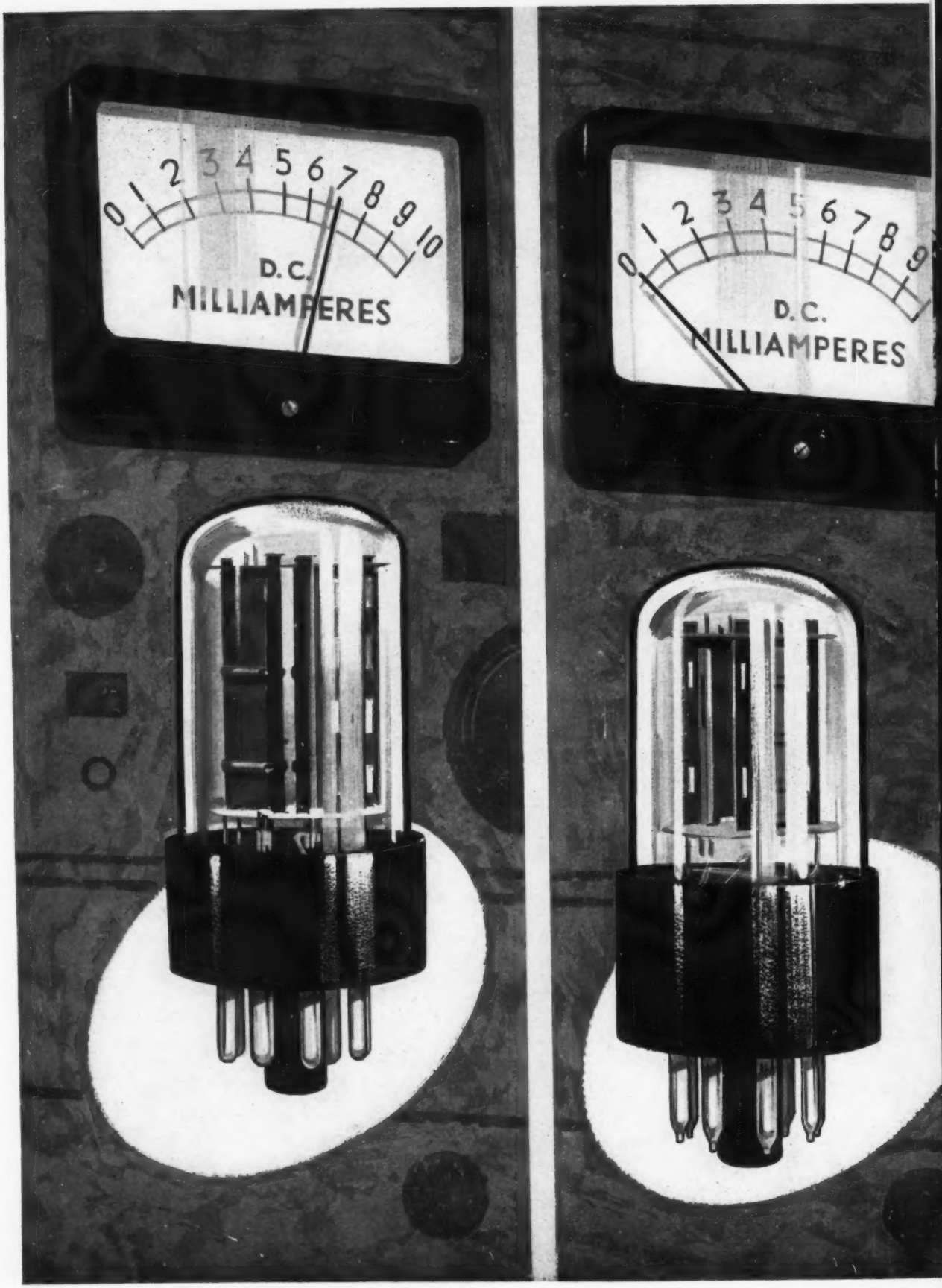
Hostess Jane Wyatt will narrate the "Nativity," with special background music by the Bell Telephone Orchestra and Chorus.

John Raitt, Jane Morgan, and the Lennon Sisters will sing your favorite Christmas songs and carols. And Lisa Della Casa will join with the Schola Cantorum to present sacred music of Christmas. Also in the spirit of the holiday, Violette Verdy and Edward Villella will dance excerpts from the festive "Nutcracker Suite."

So join the spirit of the holidays.
Tune in "A Trip to Christmas," December 22, 8:30-9:30 P.M., E.S.T. Check your local TV listings for time and channel.

*Presented by the*

**BELL TELEPHONE SYSTEM**


0 1 2 3 4 5 6 7 8 9 10
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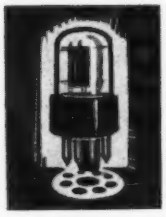
# WHAT PRICE SERVICE?



## ...or the case of the tapered tube pins!

Keeping customers happy is a great source of satisfaction to us. That's one of the reasons why we see to it that you're never more than 24 hours away from full repair or replacement service . . . and why we initiated "plug-in" design.

But we're committed to service at *any* price for another reason . . . the deep *personal* pride we take in our equipment, and our disappointment if it malfunctions in the field.

As a case in point, take the 6SN7 and 6SL7 tubes used in some of our equipment. In 1960, the tube manufacturers changed from round to pointed base pins. Fine—except there was one unique difficulty. Since the round base pin type had been in service for a long time, replacement with pointed base pin tubes often resulted in high resistance contact. The tube socket contacts, which had spread slightly during the long life of the original tube, were not meeting the new pointed pins. So, we warned our customers, made special notes in our service manuals, and bought up thousands of the round-pin type so we could meet all field replacement requirements.

Possibly a small thing in itself, but if you take care of the small things, the big things take care of themselves—to *everyone's* benefit.

This is our way of reminding you that, when you buy Lenkurt microwave or carrier equipment, you also buy the experience, knowledge and personal attention of the entire Lenkurt Electric staff.

Lenkurt Electric Co., Inc., San Carlos, California. Offices in Atlanta, Chicago, Dallas, Minneapolis, New York, San Carlos.

**LENKURT ELECTRIC**

Subsidiary of

**GENERAL TELEPHONE & ELECTRONICS**

**Specialists in VIDEO. VOICE and DATA TRANSMISSION**

# Let our "Revenue Men" TURN YOUR DIRECTORY PROBLEMS INTO PROFITS

Take a man like

**Harold Verucchi**

Harold is one of our "Revenue Men" in Princeton, Illinois.

He knows the territory well, and is well-known in the territory. In high school, Harold established a name for himself on the football field, the basketball court as well as the track cinders, and devoted his excess energy to the school paper, speech club and glee club.

After graduation, Harold started his business career as a wholesale routeman in dairy products. A short time later, he became a department manager in a chain store branch.

It was in 1953 that Harold joined General Telephone as a salesman in our Kewanee, Illinois, unit. He was promoted to Sales Supervisor of our Princeton unit in 1958.

Harold and his wife have two fine young children. You'll find Harold active in community groups like the Elks, the Princeton JC's, and his Men's Club at church.

Harold is typical of the "Revenue Men" who work for General Telephone Directory Company and for you. And they all have one thing in common—they are always an asset to any community in which they live.

Our Directory "Revenue Men" provide the Independent Telephone Industry with a flexible and highly skilled telephone directory organization. These men—working out of 35 strategic locations—are experienced specialists, trained to give you *complete* and *quality directory service.*

They act as telephone company representatives in their day-to-day contacts with your customers, not only selling and supervising the sale of Yellow Pages advertising—but also acting as public relations representatives for you in their dealings with the public.

Thoroughly trained to know any condition that pertains to telephone service, they're experienced hands at helping large and small Independent Telephone Companies "take the kinks out of knotty directory problems!"

*Write or phone our office nearest you for our Complete Directory Service Plan.*

## GENERAL TELEPHONE DIRECTORY COMPANY

1800 Oakton Boulevard
Des Plaines, Illinois
VAnderbilt 7-6111

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# IN THE NATION'S CAPITAL

BY LAWRENCE J. HOGAN, WASHINGTON EDITOR
and President, Larry Hogan Associates,
Public Relations Firm.

**Senator Kerr to introduce bill providing for private ownership of satellite communications systems. . . . Proposes 500 million dollar corporation. Administration plans increase in appropriation for space projects. Engineers hear review of REA.**

SEN. ROBERT KERR, chairman of the Senate Space Committee, said that he will introduce legislation authorizing private ownership of this country's portion of the proposed world-wide satellite communications system. Shortly after Congress reconvenes on Jan. 10, it is expected that the Senate Space Committee will hold hearings on the Kerr proposal.

Under Kerr's plan, which anticipates cooperation with foreign governments, the FCC would determine which companies would participate in the ownership of the U. S. part of the system.

Kerr said that his proposal would call for the United States to provide leadership in the establishment of a trans-world communications system involving the use of satellites at the "earliest practicable time."

**In a statement** issued in connection with the announcement, Kerr said, "Communications satellites and associated ground systems will become powerful new instruments for world peace and understanding between the people of the world. In fact, this system if properly managed can become a most powerful national asset in the next decade."

The Kerr legislation would create the Satellite Communications Corp. which would have 500 million dollars in authorized capital stock, divided into 5,000 shares (at $100,000 per share) which would be purchased by the companies participating in the plan with a minimum of five shares each. The stock could be resold without FCC's approval. Under the bill, the Satellite Communications Corp. would buy rockets, launching devices and other services and equipment from the National Aeronautics and Space Administration. The rates for services rendered by the corporation would be determined by the FCC.

The House Science and Astronautics Committee after concluding its nine-month study of the matter, said that the question of public or private ownership should not be decided until numerous other issues have been resolved.

**This proposal** by the influential Senator Kerr might help muffle some of the vociferous carping from those on the left of the ideological aisle who want the Federal Government to own and operate the space satellite communications system.

Kerr's announcement of the bill came at a very propitious time. Senator Long, a staunch advocate of government ownership of the system, recently concluded hearings which seemed to have been designed to poke holes in the private ownership plan—specifically, the recommendations of the *Ad Hoc* Committee—and promote the idea that government ownership of the system is the only practical solution for putting America out front in space communications.

The major threat to the free enterprise approach is that many key government officials, while giving lip service to President Kennedy's program for private ownership, seem to be sitting on the fence with a finger raised high in the air trying to determine which way the wind is blowing.

**Many of these** government officials who paraded before Long's committee and other bodies made haste to say parenthetically that the appointment of the *Ad Hoc* Committee by no means committed the government to the committee's recommendations, and that the administration might reverse its stand for private ownership in favor of government ownership, or in favor of a combination of government and private ownership.

Many pages of the *Congressional Record* and committee reports will be filled with the controversy before a final decision is made.

Some authorities claim that the bickering has not really stalled the space communications program, but one wonders.

### More Money For Space Projects

The administration is apparently concerned about the lag in its space projects, because it plans to double the civilian space budget of the National Aeronautics and Space Administration. The budget, which will be submitted to Congress in January, is expected to ask for at least 3.7 billion dollars and may be as much as 4.2 billion. Last year's budget was $1,671,-800,000. Most of the funds are earmarked for development of equipment to land an astronaut on the moon, but undoubtedly, all NASA projects, including space communications satellites, will get a boost from the increased appropriations.

### Dell Addresses Engineers

Richard A. Dell, deputy administrator of the Rural Electrification Administration, addressed the Telephone Technical Symposium on Nov. 30, and told the assembly that Congress' aim in adopting the telephone amendment to the Rural Electrification Act was designed primarily to benefit rural people who had inadequate telephone service or no service at all. He said the 1949 provisions in the act called for "adequate telephone service to be

made generally available in rural areas . . . to the widest practicable number of rural users." He said this was the basis for REA's area coverage policy in making loans.

"Borrowers generally have cooperated willingly and wholeheartedly in maximum area-wide service," Dell said. "They have done this in recognition of their obligation under favorable terms of financing. They have accepted the challenge to serve their local communities. And they, along with REA, turned to the engineers for the technical 'know-how' to get the job done.

**"But we still** have a long way to go. In 462 counties there are 500 to 1,000 farms without telephones today. There are 233 more counties with 1,000 to 2,000 farms lacking telephones, and then there are 45 counties with more than 2,000 farms without telephone service," he said.

"The easiest part of area coverage has been accomplished. Modern dial service around the towns and along the highways posed no real difficulties. How to reach the less fortunate farm areas and the isolated rural families is the challenge we bump up against. Solving this problem is a test still to be met by REA, its borrowers, the telephone engineering profession, and the entire telephone industry," Dell continued.

Rural telephony has made progress. In 1949, 38.2 per cent of the nation's farms had telephones. Now about 65 per cent of the farms have telephones, and between one-half and two-thirds of them are dial, Dell observed.

Dell said, "Today's subscribers are paying higher rates, but they are getting more service for their money than ever before. The entire telephone industry has gained a new appreciation of the service potential—the unfilled telephone needs—in rural America."

**During its 12-year** telephone program, REA has made telephone loans totaling close to 850 million dollars to some 760 borrowers.

"These loans are expected to bring modern dial service to one and two-thirds million subscribers," Dell reported. "Funds actually advanced by REA came to a total of 644 million dollars by the end of October. Construction has been moving along well. Our latest cutover reports show that 673 borrowers have placed in service a combined total of 2,790 dial exchanges with REA financing.

"This is bold, forward-looking action that is a credit to everybody associated with the program. And I want to acknowledge the contribution of engineers in building this record.

"High quality service in thin territory will call for resourcefulness, as we move into more marginal and more difficult stages of area coverage. It can be expected that if the job is to be done, the engineers will have to play a larger and more important role.

**"Our high** expectations for the future are justified by the past and present performance of the consulting engineers associated with the REA program. In the earliest days, there weren't very many of you. Most of the dial conversion had been a hallmark of the Bell companies and a few of the large Independents which carried their own engineering staffs.

"When REA began making loans for small Independent companies and subscriber-owned cooperatives to provide adequate rural service, we had to literally beat the bushes for qualified engineers. We had to set up a training program for REA's telephone engineers, and we solicited help from equipment manufacturers and from the Bell companies to fill the professional gap created by the demands of the new loan program. We still turn to the training program to support the security of REA telephone financing. But now we are further along and more specific in our needs. There will have to be still more consulting engineers, to cope with the expanding loan program. But the greater need now is for supplemental technical training for borrowers' employees and for the kind of symposium or seminar on technical information that we have here, to keep abreast of new developments and to discuss improvements in REA specifications."

**Dell said** that REA looks to the consulting engineers for technical instruction in borrowers' joint training sessions, and he solicited the assistance of the group in developing the skills and knowledge of men hired for line crews and for maintenance of inside plants.

"For the borrowers it will provide a reservoir of professional talent not available from any other source," he said. "For REA, it means that the people who design REA-approved systems and the people who operate them have an opportunity to compare notes about REA requirements and to understand them better."

He told the technical men that they are in a position to help managers and officers and boards of directors realize the benefits in new developments. "How a new design, or improved equipment, or faster method, or less expensive material gains general acceptance is largely in your hands," he said. "Because the telephone company or cooperative which hires your professional services expects to follow

## Convention Calendar

### 1962

| *Association* | *Date* | *City* | *Hotel* |
|---|---|---|---|
| **Minnesota** | **Feb. 25, 26, 27 and 28** | **Minneapolis** | **Radisson** |
| **Louisiana** | **Feb. 28; Mar. 1** | **New Orleans** | **Monteleone** |
| **Kentucky** | **Mar. 6** | **Lexington** | **Phoenix** |
| **Texas** | **Mar. 11, 12 and 13** | **Dallas** | **Sheraton-Dallas** |
| **Iowa** | **Mar. 19 and 20** | **Cedar Rapids** | **Roosevelt** |
| **Ohio** | **Apr. 3 and 4** | **Columbus** | **Deshler Hilton** |
| **Nebraska** | **Apr. 18 and 19** | **Omaha** | **Sheraton-Fontenelle** |
| **Wisconsin** | **May 8 and 9** | **Milwaukee** | **Plankinton** |
| **Indiana** | **May 9 and 10** | **Indianapolis** | **Claypool** |
| **Kansas-Missouri*** | **May 21 and 22** | **Kansas City, Kan.** | **Town House** |
| **Illinois** | **May 24 and 25** | **Springfield** | **Abraham Lincoln** |
| **Pennsylvania** | **June 4, 5 and 6** | **Bedford** | **Bedford Springs** |
| **New York** | **June 11, 12 and 13** | **Whiteface** | **White Face Inn on Lake Placid** |
| **California** | **June 13 and 14** | **San Francisco** | **Jack Tar** |
| **Washington-Oregon*** | **June 21 and 22** | **Portland, Ore.** | **Sheraton** |
| **Michigan** | **Sept. 18, 19 and 20** | **Lansing** | **Jack Tar** |
| **Rocky Mountain** | **Sept. 19, 20 and 21** | **Salt Lake City, Utah** | **Utah Hotel Motor Lodge** |
| **New England** | **Oct. 1, 2 and 3** | **Poland, Me.** | **Poland Spring Hotel** |
| **USITA** | **Oct. 22, 23, and 24** | **Chicago** | **Conrad Hilton** |
| **Oklahoma** | **Nov. 14 and 15** | **Oklahoma City** | **Skirvin** |

***Joint meeting**

your recommendations. This is the reason why REA expects you to be thoroughly familiar with new engineering requirements and new service concepts.

**"The design** of modern telephone systems for the special needs of rural subscribers was a relatively unexplored field of enterprise, until REA entered the picture. Now, some of these developments are taking hold very fast."

Deputy Administrator Dell reported that since 1957, REA borrower systems have been moving rapidly toward reliable, all-buried outside plant. Loans for buried plant made up about 3 per cent of total loans for outside telephone plant in fiscal year 1959. The following year saw buried plant jump to nearly 25 per cent. In the fiscal year, which ended June 30, 1961, loans for buried plant doubled and accounted for almost half of total outside plant. Actually 79 projects, involving 13,200 route miles of buried wire and cable, were approved by REA for financing during this last year.

He added that where the use of buried plant is practical, it is yielding excellent subscriber service at reduced installation costs and the record so far shows less upkeep and lower maintenance costs. He told the technical men that tests on long-span construction continue to indicate substantial savings in construction and maintenance costs in those areas where it is suitable.

**"Consulting engineers** can always boost wider coverage by keeping costs down," Dell said. "Notable savings can be made by economical staking, by encouraging contractors to guard against wasteful practices, by helping borrowers to avoid both underbuilding and overbuilding of initial plant.

"I think there is a tremendous future in rural telecommunications. Tying the millions of farm families and non-farm rural subscribers into the nation's telephone network makes the service more valuable to everybody. The systems you designed several years back are, in many cases, adding new exchanges now. Additional population growth assures still further expansion and improvement in telephone design, construction and operation," Dell said.

### Canadian Pay-TV Expanded

Paramount Pictures Corp. and its subsidiary, Famous Players Canadian Corp., have announced an extension of the Pay-TV experiment being conducted in a suburb of Toronto, Ontario, Canada. The new cable which will be finished by early next year is expected to bring the total number of subscribers to 6,000 compared with 5,000 currently.

Paramount has admitted that the project is losing about $3,500 per week before depreciation, so they apparently feel that increased volume will help to push them into the black.

### Capitol Revamped

The customary hiatus which lulls governmental activity between Thanksgiving and Christmas has fallen over the Nation's Capital.

The conservative versus liberal battles shaping up to fill the vacancies created in both parties by the deaths of House Speaker Sam Rayburn and GOP Senator Styles Bridges have not even been sufficient stimuli to distract Washingtonians from their Yuletide shopping excursions and annual leave plans.

In spite of the intense behind-the-scenes activities of contenders for the posts, Senator Saltonstall of Massachusetts, now the senior man on the Republican Policy Committee, is the best bet to replace Bridges. He is the ranking Republican on the Armed Services Committee and the Appropriations Committee. Saltonstall is much more liberal than Bridges. On the House side, John McCormack of Massachusetts is the odds-on favorite to succeed Rayburn. Representative Bolling of Missouri is campaigning very hard to beat Representative Albert of Oklahoma out of the majority leader's job which McCormack will vacate.

**Most congressmen** are back home patching up their business interests and at the same time trying to convince voters they're still working very hard as congressmen.

While the senators and congressmen are at home, their venerable Capitol Building is undergoing a facelifting. An army of workers is rushing to finish their labors before the solons return to Washington. Corridors are shut off, stairways closed, elevators halted. Everything except the House and Senate chambers seems to be involved in the spruce-up.

The work is part of the controversial extension of the East Front which will cost about 24 million dollars, including the furnishing of new offices. The extension has created space for about 70 new offices. A large part of the East Front on the main floor of the Senate wing will be set aside for the vice president's quarters. On the House side, a large, similar suite will be assigned to the new Speaker of the House. "Hideaways" are planned for members of Congress.

**On the gallery** floor where visitors and press representatives witness the legislators in action, a new corridor is being provided to connect the House and Senate wings. New restaurants are being established and old ones are being revamped. The subways to the House and Senate Office Buildings are undergoing repairs. To help solve a poor lighting problem, chandeliers are being installed in various parts of the Capitol.

The workmen are also working on an extremely important project involving the dignity of the nation's top lawmakers.

Washington is the residence of a very prolific, noisy and ubiquitous starling population—offspring of a foreign government's misplaced generosity countless bird generations ago. Businessmen, government officials and private citizens have for years focused their mental powers on finding solutions to the starling problem. Stuffed owls, noise-makers, recordings of hawk screeches, flippers-in-the-wind and many other ingenious, but ineffective, schemes have been tried. Now, electrified wires are being tried to scare off the pesty birds which inhabit the Capitol Building.

Some congressmen have advanced the theory that the Capitol-housed starlings might be reincarnated voters expressing disdain for their former representatives, but the theory is generally discounted. The birds cannot be expected to distinguish senators and congressmen from common people, since the former are always professing that they *are* common people. Many observers agree wholeheartedly that they are, including, apparently, the nondiscriminating starlings.


**COMING FEATURE**

***"Step-by-Step Dial Traffic Metering," by a Dial Traffic Engineer of a large Independent company.***

* * *

***How to check traffic to determine if equipment is adequate and properly operated to provide a quality grade of service.***

**WATCH FOR THIS TIMELY ARTICLE**

# "THE INDEPENDENT"

**USITA–sponsored motion picture makes big hit with Independent companies. A story of how a typical Independent "got started and grew," film is designed for local showings. It may be purchased or rented.**

THE 28-MINUTE, 16mm., sound and color motion picture—*The Independent*—produced for members of the United States Independent Telephone Association by Parthenon Pictures, has met with enthusiastic acceptance by Independent telephone companies.

The film, introduced at the USITA October convention, is available to Independent telephone companies on a rental or purchase basis. By Dec. 1, 162 large and small Independents had purchased 180 films for showing before local organizations and schools.

*The Independent* is a pictorial story of how the average Independent telephone company "got started and grew." It is a fictional story of the four generation "Jensen telephone" family and their "Middle Counties Telephone Co."—how it was started, how it progressed, and how it had served its community faithfully for 50 years, culminating in the cut-over to dial operation.

The cut-over takes place at 12:01 a.m., when the cables leading into the old exchange are cut, and the new exchange comes to pulsing, clicking life, never to go quiet even for a few minutes during the lifetime of most of the people who witness it.

The events of the cut-over itself are interspersed with odd and interesting facts about telephone people and how they do what they do.

The film is designed for the local telephone company to show at its service club luncheons, at meetings of community organizations such as women's clubs, church men's classes, farm bureau and Grange meetings, at chamber of commerce gatherings, in school classrooms, etc. When a showing comes to its end and the lights go on, the local audience should have a new realization of what an Independent telephone company is, of what it does, and that they are fortunate to be served by one; a respected member

**Peter Jensen (standing) and his grandfather Walt get together in latter's telephone museum, a setting for warm and interesting scenes in "The Independent."**

of the worldwide communication network, yet a strong-rooted member of the local business community and dedicated to its best interests—a good place to work, and a good business in which to invest.

Individual telephone companies may purchase or rent prints of the picture, carrying their local-company credit titles at the head and end of the film. They usually preview the picture for a meeting of their "insiders"—employes, directors, local stockholders, top toll accounts, and newspaper men. Then the premiere often features an open house at the company's office, with subscribers and civic leaders invited.

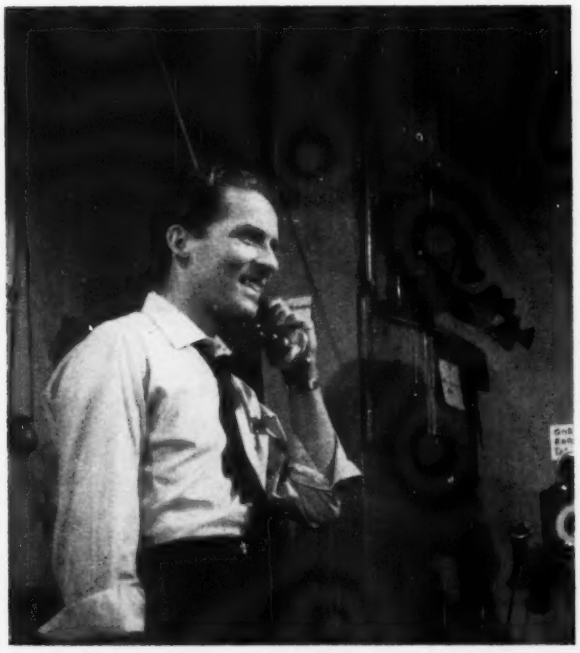
After these special occasions, the film is promoted for showings at meetings of all the worthwhile clubs, organizations and groups in the company's service area, usually with the local manager doing a brief introduction.

Finally, the film is presented to the local high school, or the school system's audio-visual library, for permanent school-use custody. ("*Landers Film Reviews*" recommends *The Independent*, for use in the following courses: Science, social studies, communications, democracy and community life; with further applications in the fields of industry, human relations and Americana—plus specialized uses in economic classes, business courses and vocational meetings).

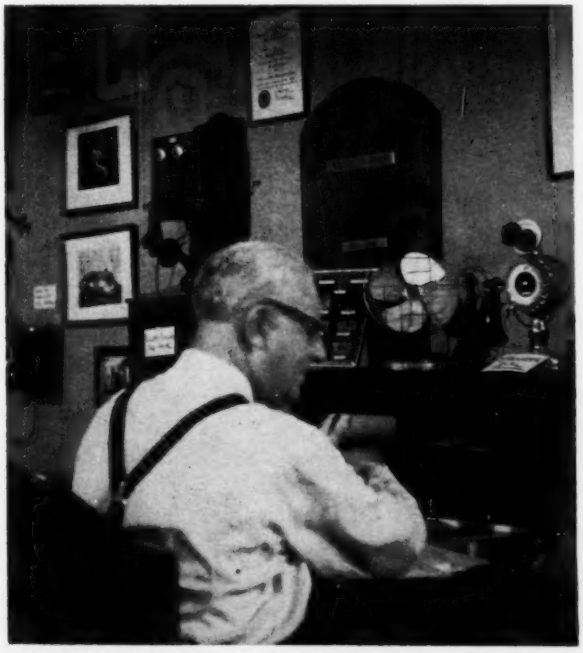
Soon the film will have been seen at least two or three times by practically every boy and girl who graduates from the high schools, with results ranging from broad recognition of what the telephone company does (by its future subscribers and future community opinion-makers) to the immediate benefits of encouraging applications from some excellent young people for employment. For schools located in industrialized communities, this film has the further advantage of being a strong demonstration of the American system of free enterprise in useful operation.

*(Continued on page 46)*

**One of the scenes in "The Independent" showing a service representative taking a service application for the "Middle Counties Telephone Co."**



**Young Peter Jensen of the fourth generation of the family, takes time off from supervising the cut-over in equipment room to use one of his grandfather's old museum telephones.**



**Close-up of Grandfather Walt Jensen in his museum the night of the cut-over, as he contemplates the many changes and improvements in the family-owned telephone company.**

# SERVING TEXAS' FASTEST GROWING CITY

BY RICHARD L. POST*

**PART 2. The preceding article appeared in the Dec. 2 issue.**

IT WAS mid-March, 1960. The time had come for The Southwestern States Telephone Co. to break phase one of the Irving special advertising-public relations campaign.

The employe facts booklets on Irving telephone expansion had already been printed and distributed.

Employe meetings outlining the mammoth expansion and improvement program had been held.

A giant Irving street map indicating location of expansion projects had been used for the employe meetings and was now set up in the downtown Irving business office lobby.

### Time to Tell Public

The employes knew the complete service picture—how the deficiency occurred and what the company was doing to alleviate it.

It was time now to break the story to the public.

Deciding upon what advertising media to use presented one of the first real problems. Irving had a *weekly* newspaper, but no radio or TV stations. It was questionable whether use of the one newspaper alone would be enough to reach all Irving subscribers effectively.

A close look at the typical Irving resident showed he was Dallas-oriented. Three out of four Irving residents worked in Dallas, but lived in Irving. They watched Dallas television stations and listened to Dallas radio stations. They read the Dallas daily newspapers. But Dallas advertising would involve wasted "extra" circulation, since Irving was only a small portion of the Dallas daily newspaper coverage and of the Dallas radio-TV audience. Using Dallas advertising media was impractical as well as out of reach financially.

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*Mr. Post is Public Relations Director of Southwestern States Telephone Co., Brownwood, Tex.

**Giant painted bulletin billboard with WATCH IRVING PROGRESS theme, located on expressway from Dallas to Irving.**

**Adhesive-backed posters carrying the WATCH IRVING PROGRESS theme were used on both sides of all company vehicles in the Irving area.**

One fact was very evident: Irving people are mobile people. They drive to work, to the shopping centers, just about everywhere. For that reason, it was decided to employ various types of outdoor advertising along with the local newspaper as principal advertising sources. This would be supplemented by bill enclosures and public relations activities on a wide scope.

Specifically, we decided to utilize:

(1) Adhesive-backed posters on every vehicle in the Irving exchange.

(2) Four 24-sheet poster billboards at strategic locations.

(3) One 47-foot x 10-foot painted bulletin billboard in Irving, on the expressway leading from Dallas to Irving.

(4) Signs on T-frames at all sites of outside plant construction.

(5) Two three-column by 5-inch newspaper ads monthly in the Irving *News;* in other words, an ad in every other issue.

### Same Theme and Design

Each of the above would follow the same central design and theme.

For the first of a three-phase, yearlong campaign, the theme would be WATCH IRVING PROGRESS. These three words, *without any company identification* were integrated into a design using a telephone dial.

The theme was rather discreet. Irving was the fastest growing city in Texas and progress was a word with meaning in this Dallas suburb. All Irving people were aware of progress in Irving.

Had only one billboard or one newspaper ad been used, the campaign would have had no meaning. But, this design and theme appeared visually from billboards, newspaper ads, company vehicles, construction site signs, etc. The result was a message—saying indirectly "Watch Irving TELEPHONE Progress." Significantly, it contained no bold claims to remedy the situation *immediately.*

Experience has shown that in a critical service situation a utility's first public statements pledging to improve matters are often met by clamor for *"deeds—not words!"* This fact was

**Whenever construction work was taking place, the WATCH IRVING PROGRESS theme appeared on specially constructed construction signs (right). Note the company vehicle in background with vehicle poster.**

**New sign erected at site of new BL-5 telephone center. Note the dial design which was to become part of the design theme to be coordinated into all advertising during the special 1960 campaign. This sign was lighted at night and made use of effective color.**

**Southwestern States' exhibit at the Irving Industrial Fair which created a great deal of interest as part of the WATCH IRVING PROGRESS campaign. Note map (right) showing details of construction program and architect's drawing of BL-5 telephone center.**

the key to the decision to hold company identification to a minimum in the "WATCH IRVING PROGRESS" phase. The aim was to let the subscriber discover for himself that the telephone company was behind the campaign—*after* he had become aware that something was going on.

### Topic of Conversation

This approach was far more realistic than making a number of promises to the public at the outset and running the risk of project delays, and a worsening climate of public opinion.

By mid-April, the WATCH IRVING PROGRESS theme was becoming a topic of conversation in Irving.

An important step was the erection of the sign at the construction site of the second central office building (BLackburn 5) to fit into the design theme.

Here was a 13½-acre mesquite patch in an undeveloped area where Southwestern States engineers foresaw the center of home building activity in the future and decided to build a second telephone center. Not only a large second central office, but a telephone number assignment center, test center, three large steel buildings to shelter vehicles and house warehouse facilities, and a division office were to be constructed on this huge site.

### Added Impetus to Campaign

With only 1,700 subscribers in the area at the time, the telephone company predicted 6,300 subscribers in that area within five years, thus the reason for locating the new telephone center miles from the downtown central office. The new sign at the new telephone center added impetus to the already extensive advertising campaign.

The first of a series of informative bill inserts was prepared for April billing. With a photo of Division Manager W. P. Esslinger on the cover, the bill enclosure had the simple headline *Irving Progress 1960*. The copy was simple and conversational:

"You know, the story behind the amazing growth of Irving, Tex., makes mighty interesting reading—and fascinating conversation with some of the old-timers. Right now though, it's enough to say that Irving has grown close to 2,000 per cent in population just in the last 10 years. Since 1956, more than 3,200 new homes have been built. And, of course, the families who move to Irving want telephone service right away.

"Party-line service has been the only practical answer. That way everybody who wants a telephone can have one.

"But Irving sits right next to Big D. And most Irving folks have many reasons each day to call Dallas or receive a call from Dallas. That's what led to the establishment in mid-1958 of what telephone people call Extended Area Service. It's just a long name for the fact that you don't have to pay a long distance toll charge every time you make or receive a call from our big neighbor across the Trinity.

"The mechanics of Extended Area Service are impressive—and expensive. The *psychology* of it is quite interesting, too. Once these calls, back and forth from Dallas, are made *free* —a lot of folks make a lot more calls than they used to. Now, this has always been true all over the nation when a suburb of a major city is given this type of service. The trick is to figure out *in advance* how many *more* calls will be made once the new service is put into effect. Telephone engineers call this the 'stimulation factor'.

"Long before Extended Area Service came to Irving, we put our very best engineers on the problem. And since our friends in the Southwestern Bell Company were involved, too, they put some of their best engineers on the problem. Together, based on experiences in other parts of the country, and on the particular conditions that exist here in Irving, these engineers came up with a statistical estimate that four times as many calls would be made back and forth between Irving and Dallas after the toll charges were eliminated.

"All the studying that went into this figure back in 1956, 1957 and 1958 would probably fill several books as thick as the Dallas telephone directory. And remember, some of the finest brains in the telephone business figured it out.

"But it was wrong.

"Within six months after Irving got its Extended Area Service with Dallas, telephone traffic between these two points was *eight times the previous load*. That figured out to nearly a million and a half calls per month both ways. It's even more now.

"With so many people using the telephone so much more than they used to, naturally the party-line service began to cause even more trouble. Lines just simply weren't available every time folks wanted them. We at Southwestern States Telephone Co. immediately began more engineering studies to correct this situation. Equipment was ordered just as soon as the studies reached a point where we *knew* what we would need. But buying telephone equipment isn't like buying a typewriter or a new car or a loaf of bread. Every piece of equipment has to be custom-engineered and custom-built. And we ordered a lot of it.

"Normally it takes about 18 months from the date of order to the date of receipt for major telephone equipment.

"The problem started in November, 1958 with Extended Area Service. And now in 1960 those 18 months are about up. The equipment is beginning to arrive. And as soon as it arrives we are putting it into place just as quickly as possible.

"You will see and hear a lot in the next few months about our major 1960 expansion program. All in all, it's going to cost Southwestern States about $1,600,000—or roughly $134 for every telephone customer. It's going to take all of 1960 and into 1961

*(Continued on page 43)*

# CAROLINA T&T SPEEDS SPLICING

By E. E. LEACH*

IMPORTANT in the development of any product are the results it achieves early in its introduction. As a follow-up to premarketing field tests, studies are made to determine how products are used, where they are used and how they perform.

One example is the self-stripping, self-sealing communications connector introduced by 3M in mid-1960. Through the cooperation of several representative telephone companies, detailed reviews have been conducted on the progress of the new connector. Carolina Telephone & Telegraph Co. of Tarboro, N. C., is one of the companies.

With 111 exchanges in operation, serving 200,000 stations as of June, 1961, and with a plant investment of 103 million dollars, Carolina Telephone is rated as the third largest Independent in the country in the amount of toll line in service. Total sheath miles of plastic cable grew by approximately 800 miles during 1960.

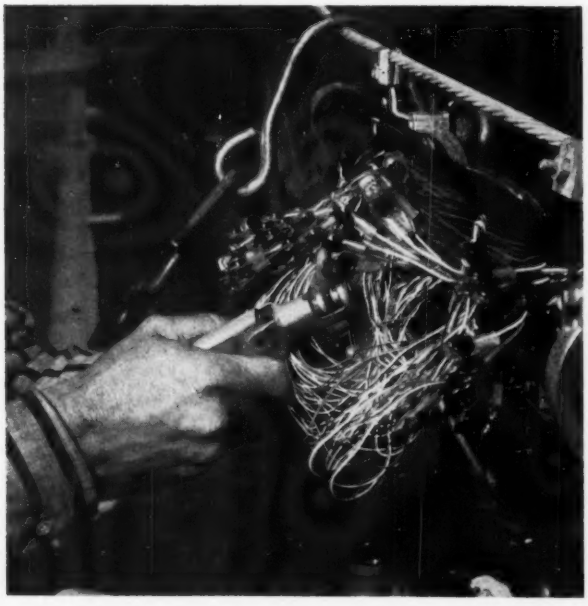
**At Carolina Telephone,** it was found that labor costs for splicing multi-pair polyethylene insulated telephone cables have been reduced as much as 50 per cent, through use of the connector. In addition, the problem of open circuits has been virtually eliminated at installations where the connector was used.

As a result, the connector, the "Scotchlok" brand type UR, is being used in splicing No. 19 to No. 26 AWG solid and No. 20 to No. 26 AWG stranded plastic insulated cable on new construction, as well as maintenance and repair projects at Carolina Telephone. More than a half-million of the connectors are in service through the company's system, which covers 41 counties in eastern North Carolina.

On aerial cable, splices are enclosed in ready-access type terminal-splice enclosures. The connectors are used for straight-through and branch splicing, for rearranging drops and making other changes in terminal requirements where splices are necessary. The connectors are also used on bur-

*(Continued on page 44)*

* Mr. Leach is Supervisor of Electromechanical Products Development, Electrical Products Division, Minnesota Mining & Mfg. Co.



**UR connectors are used on buried cable, with splices enclosed in pedestal-mounted terminal boxes. Connection is made by inserting connector in the specially designed crimping tool and squeezing the ratchet controlled handle. Wires can be paired, connectors for each circuit slipped on, then several connections made in succession.**

**◀ UR connectors are used for straight-through and branch splicing, for rearranging drops and making other changes in terminal requirements where splices are necessary. With the wire ends clipped even, connection is made in two simple steps—inserting wires into connector and depressing red button with the crimping tool. Splices are enclosed in ready-access type terminal-splice enclosures.**

# BOSSES—*the care and feeding of*

by HAROLD R. HUNTLEY*

WHEN THE editor of the *195 Magazine* asked me to write something as, I suppose, my Valedictition, he suggested three possibilities:

(1) Some of my philosophy regarding engineering.

(2) Some of my experiences in the business.

(3) Advice to young engineers.

I decided that none of these subjects were appropriate, for several reasons:

- I never yet have written or made a speech on a specific subject which had been assigned to me and I see no reason to change now.
- I have written and talked so much about my philosophy of engineering that I would have to repeat myself, which would be very boring.
- I cannot remember any particular experiences which would be interesting even to me—much less to you.
- I do not intend to start competing with people who run columns which purport to answer any and all of the problems of mankind.

**On the other** hand, I thought it might be helpful both to young and old engineers to say a few words on the general subject of how to be happy and useful in spite of being an engineer and in spite of having to report to a boss. (If you want to consider this as giving advice you are welcome to do so.)

The reason why I think this might be so is that my experience tells me that the single most important factor in how good a job is done by a gang whose output is creativity, is an understanding of the boss-bossed relationship. And this is true for engineers of all ages and at all levels of the organization.

Now the boss-bossed relationship is a two-way street; there is the relation of the boss to the bossed and of the bossed to the boss. I am going to talk only about the bossed-to-the boss relationship for several reasons.

**The first reason** is that there are many people who write about the functions of bosses—their responsibilities, how they should conduct themselves, etc.—and I couldn't add anything useful to the already voluminous literature on the subject and, in addition, I couldn't do as good a job as they even if I tried.

Most of these people have the advantage over people like me in that they can stand off and look at the job in a detached and dispassionate manner, whereas I have been immersed too deeply in the bossing business myself to be sure I could write objectively about it. I know of no mirror which a boss can look into and which will tell him about his sins of commission and omission. At least, I can't find one, and all I can do is cry with Robby Burns:

"Oh wad some power the giftie gie us
To see oursels as others see us!
It wad frae monie a blunder free us
An' foolish notion."

H. R. HUNTLEY

**And the second**—and more important—reason is that all my experience tells me that, regardless of the level in the organization at which one happens to be, learning how to be bossed is more important and useful and involves at least as many problems as learning how to boss. And I think I can write about this subject with some justification because I have had a lot of bosses and have, I hope, learned quite a lot about their care and feeding. Also for whatever it may be worth, what I may have learned about bossing stems almost entirely from what I have learned about being bossed.

Now the process of learning how to be bossed is simple in its fundamentals but requires constant work and application. All one really needs to know are three things:

(1) Why he has a boss at all.

(2) That he is the guy that has to get the right things accomplished.

(3) That bosses are human beings.

**Let's look at** these three things in turn from the standpoint of how they affect the problem of being bossed.

If one is going to do a good job of being bossed, it seems to me that he should understand two of the main reasons for having bosses at all. These two reasons are:

(1) There must be a boss to help to set the direction in which the gang should be moving.

(2) There must be a boss to see to it that the total output (in whatever terms it is measured) of a group of people organized as a gang is greater than the sum

* Mr. Huntley served as Chief Engineer of American Telephone & Telegraph Co., from which position he retired on Dec. 31, 1959. This article is reprinted from "195 Magazine," AT&T employe publication.

of the outputs of the same people working as individuals.

Note that I said "help" set the direction. This is important because direction—and this includes everything from minor decisions to broad policy—is *not* set in a vacuum; it is set as the result of judgment applied to the syntheses of a large amount of information and data and ideas, and the most important source of this information and data and ideas is the gang.

**The second aspect** of why one needs a boss is more subtle and, as nearly as I can find, very little has been written about it. But it is true that by being properly organized in a gang, a group of people will produce much more than the same people would if they were not so organized. And this means that each person's production—and his stature—is enhanced by a proper organization.

This is not too easy to explain in simple terms but perhaps a parallel will help.

If one watches a pro-football game, he sees 22 individual stars in action. But he sees more than this. He sees that each of these stars can star only because the other 10 stars on his team perform their star-like functions in a coordinated manner. And they can perform these functions in a coordinated manner only because they are organized and have a boss—some one who is charged with the responsibility of seeing to it that judgment is applied to the syntheses of all of the information and data and ideas he can get his hands on. Without this kind of organization—and without a boss—nobody would be a star.

**And so it is** in an engineering gang; it is just as important for each member to understand this principle if he wants to be happy and useful as it is that the football star understand it. And understanding it will help mightily in learning how to be bossed.

The second main thing I said above that a person needs to know is that each member of the gang—at whatever level he is in the organization—has the responsibility to get the right things accomplished. And even if he is a boss, I am not talking about getting these things accomplished only through the gang of which he is boss, I am talking about getting them accomplished—period.

In order to get the right things accomplished one must, of course, work out in his own mind, what the right things are. And here he must go far beyond what he reads in books—or even what he reads in the voluminous literature sent out by 195—and far beyond what his boss asks—or tells—him to do. He must use his imagination, the understanding of technological and economic and social trends, and then he must arrive at a conclusion through the one process that no one can tell him how to carry out—the process known as "judgment."

**Now comes the** acid test of whether he is or is not doing a good job of being bossed. And this test is whether sooner or later his conclusion (assuming it to be a good one) becomes the direction in which the gang moves. I say "acid test" because too many people think—and act—as if the fact that an idea is good will automatically ensure that everybody—including his boss—will immediately jump on the band wagon.

Of course, in some cases one may be lucky enough so that the boss (and everybody else) does in fact jump on the band wagon right away. But in my experience, more often than not, it is not that easy. And when it doesn't happen, one must be very careful not to dive from the heights of enthusiasm directly into the slough of despond. This is no good; all it can result in is frustration and the dumping of a potentially good idea down the drain.

In my book, one should act on the premise that it takes just as much imagination and clear thinking—and a lot more patience—to get an idea across to the boss (and other people) as it does to develop the idea in the first place. And it takes great flexibility of mind both in the way one goes about it and in willingness to reshape the idea—or even drop it—if the added information one obtains from his boss or other people says that this is the thing to do. But one should not drop an idea *merely* because the boss doesn't buy it right off the bat.

**Now the reason** why it often takes such persistence and flexibility of mind to get a good idea across is the third main thing that a person needs to know about being bossed. That is—evidence to the contrary notwithstanding—bosses are human, which means that they have the same wide range of characteristics and are as unpredictable as other humans. Any notion that just because a guy becomes a boss he suddenly turns into a machine and proceeds to act strictly in accordance with a set of rules or principles which he read in a book or got taught in a classroom, is just dead wrong. He remains a human being.

And in my experience, the fact that bosses are human is all to the good. In the first place, while I agree with many of the things people write on the subject of bossing, there are some things I am not sure of and some things that I definitely disagree with. Therefore, I wouldn't want a boss who performed strictly in accordance with the books. But more important, it is a lot more fun dealing with a human being than with a robot; in fact there is more satisfaction in having accomplished something which took a lot of work with one's boss than there is in something which dropped out in the hat. I suppose this is just a normal human reaction; one gets a lot more kick out of solving a difficult problem than an easy one.

**Now, the fact** that the boss is human means that there is no one best way to get things done through—or in extreme cases in spite of—him. The principle is much the same as that involved in testing a new product in the marketplace.

First, one must analyze the boss as well as he can. On the basis of this analysis, he must make up his mind how far he should carry the job before telling the boss about it, and how he should go about presenting the story when the time arrives. From here on, he must proceed pretty much by trial and error. I hope I may be pardoned for adding one more twist to an old saw, "If at first you don't succeed, try another approach."

If one does this and learns to profit by both his mistakes and his successes in dealing with his boss, and is patient, my experience says that he can get to the point where his successes far outweigh his mistakes. And no one can ask more than this.

Good luck to all you engineers, bosses and bossed alike—and even to any non-engineers who have been brash enough to read this.


**COMING FEATURE**

***Series of articles on "routine testing of both C. O. and outside plant facilities," by a Chief Engineer of a leading Independent company.***

**MUST READING FOR ALL PLANT AND ENGINEERING PERSONNEL**

# Some Travel Notes on Foreign Telephone Service

By PHILIP ROUDA*

YOU WILL not have to read very much of this article to know the author is not a telephone operating man. But my more than 17 years of working with the industry through the Telephone Advertising Institute have caused a lot of what interests you to rub off on me.

Whenever travel takes me abroad, I try to take a look at the telephone service. This is not a technical look nor a formal study mission. Neither is it any attempt to make comparisons, favorable or unfavorable, between the telephone service in any country I might be visiting and service in the United States. Most of my "look" is just a matter of what I have seen, or what, by pure coincidence, has happened to me when I used the telephone in Europe.

My most recent trip to Europe and the Middle East, in September of this year, took me to Rome, Athens, the Aegean Islands, Istanbul, Turkey, Israel, a brief stop at the Paris airport and London. Rome, Paris and London were being revisited. The rest of the places were brand new to me.

Rome, which I had last visited in 1953 reflected its growth and higher standard of living in telephone promotion. It was interesting to see advertisements promoting color sets in Italian magazines. The telephones sounded the same as they did eight years ago. You technical men can tell why the sound of a telephone system varies from country to country. There are undoubtedly sound engineering reasons why. As an observation, perhaps the national characteristics of the people contribute a lot to the sound of their telephone voices.

### Athens, A Comedy Of Errors

To you Greek readers of TELEPHONY, please, I love your country. In fact, you'll find me a walking tourist agent for Greece and I regard my experience with your telephone service as amusing.

One day I had an occasion to make a business call from my hotel in Athens, which I placed through the Greek speaking operator. With some search she located my party in nearby Piraeus. After about a minute of conversation the line went dead. Leaving the handset dangling in the booth, I went to the operator and reported my trouble to her. She angrily said, "You hung up." Finally my party called back and said we had been cut off at his end. We spoke for two minutes more and it happened again. He again called me back and we completed our conversation.

A check with some Greek friends indicated that this happened with some frequency in Athens. Telephone service still is not as widespread in Greece as we understand Greek telephone men would like it to be.

The same held true in Turkey. While we did not have occasion to talk to telephone men in either Greece or Turkey, we did learn that aggressive efforts are being made to improve and broaden service.

### Israel—Held Orders and DDD

The telephone industry in Israel was bound to be a reflection of that dynamic, growth-minded country. Expansion cannot begin to keep up with the demand for service. We learned that in some parts of the country held orders are reckoned in years. High priorities are sometimes reckoned in months even in cities such as Tel Aviv and Jerusalem.

PHILIP ROUDA

Initial installation costs of telephones in Israel are very high, but they have no apparent effect on the demand. Mechanically, our experience with the service was excellent. Direct Distance Dialing is quite common there.

We had occasion to see two telephone directories in Israel. These are both nationwide. One is in English. The other is in Hebrew. Perhaps there are local directories as well, although we did not see them.

The outside telephone booths in Israeli cities present a unique sight. The signs on them are in three languages: Arabic, English and Hebrew. The main telephone building in Tel Aviv is quite impressive.

### Paris—Telephone for English

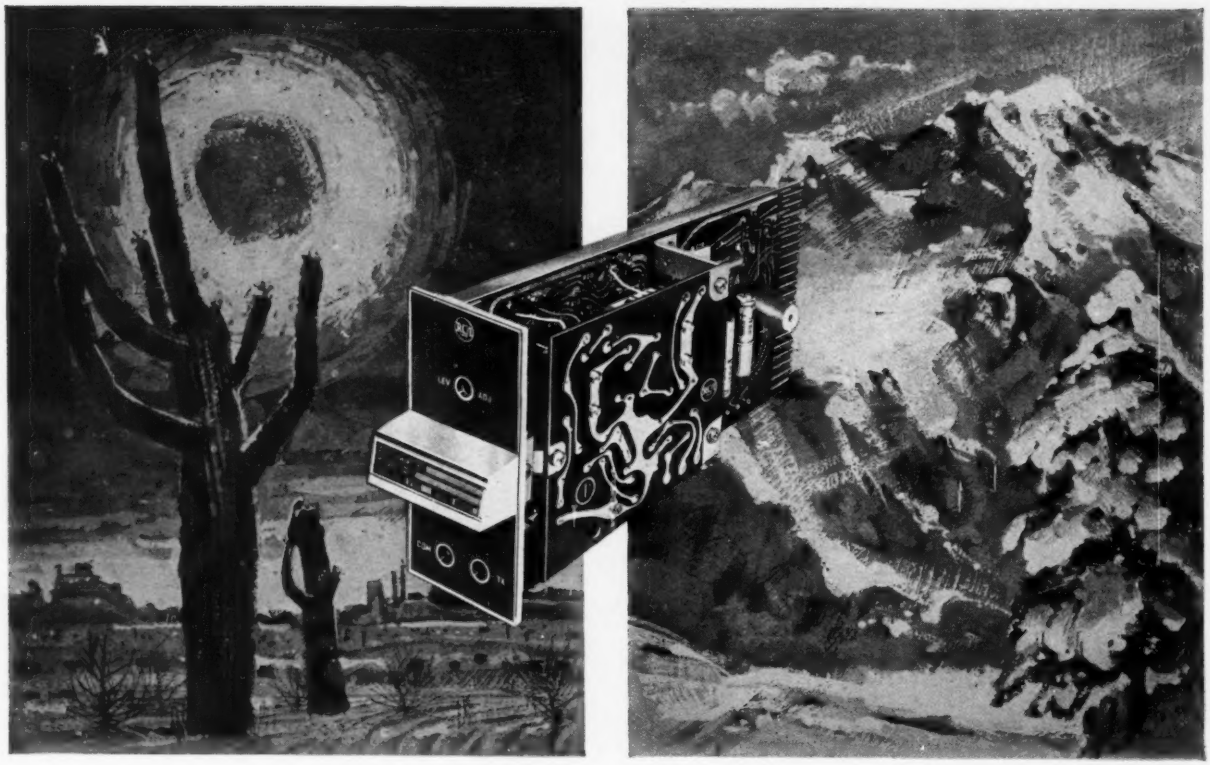
We had a brief stop at the Paris airport en route to London. Previous recollections of French telephone service were not particularly vivid. However, we received a highly favorable new impression of French telephone service this time. One of the telephones in the airport, and a handsome color set at that, had instructions for its use in English. This was the only such telephone and we heard more than one grateful traveler comment upon it.

### London Service Still Growing

In London, we had our best opportunity to see how a European city's telephone service has grown. This was our third visit, the last being in 1959. There must be an equation between automobile traffic and telephone traffic. We saw new throughways and super-highways being built in quantity. And the London telephone directories are larger than ever. It was significant to note that subscribers can make a call on important Cricket Match Days and get specific weather and ground reports.

One final comment. In 1959, when the cold war wasn't quite so warm, we visited Moscow. The telephone service, such as it was, we found to be excellent and easy to use. It was a bit surprising though to find outdoor telephone booths in Moscow with no telephones in them.

* Mr. Rouda is Account Supervisor of Telephone Advertising Institute and Vice President of Bozell & Jacobs, Inc., Chicago, Ill.



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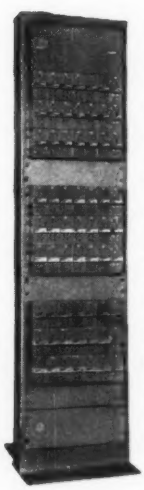

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# MIND YOUR OWN BUSINESS

## Here's a personal file of stimulating ideas; little known facts and problem solvers

By TED POLLOCK

**The Art of Tooting Your Own Horn.** "Modesty," someone once said, "is a fine jewel, but many who wear it die beggars." It's true. The man who gets ahead today has mastered—among other things—the delicate art of calling attention to himself.

Need some publicity yourself?

Here are four techniques that work.

• *Speak up.* Information has a way of "percolating" up and outwards. In your day-to-day contacts, you undoubtedly talk to *some* people who, in turn, pass along part of what you say in *their* day-to-day contacts. Since you never can tell where this "chain of talk" will end, forge as many "links" as possible.

Got an idea you'd like to call to the attention of higher-ups? Without going into details (after all, *you* want the credit), mention it to your colleagues. Sooner or later, Mr. Right will hear about it. Opportunities for sowing these conversational seeds: During coffee breaks . . . lunch . . . traveling to and from work . . . on the job.

• *Get yourself talked about.* This technique is as old as gossip and as new as tomorrow's headlines. By becoming the subject of others' conversations, you create in effect a corps of publicity agents for yourself.

Talk to the "influentials" in your life, those people who can help you get noticed. They will vary according to your needs, but generally will include community leaders, your superiors, people who know your superiors, customers or clients and so on. Have an idea for a civic project? Talk it over with your local banker. Got a pet peeve? Tell the editor of your hometown newspaper. Know how to increase good will for your company? Tell your boss. Things get around.

And don't overlook your relatives, particularly your wife. She has her contacts, too. She belongs to clubs, chats with neighbors, entertains, makes telephone calls, meets the wives of other men. Women like to boast about their husbands. So let her in on your ideas and achievements. Human nature will do the rest.

• *Write.* To newspapers. To magazines in your own field. To associations. There are literally hundreds of occasions for sitting down at a typewriter: To pass along news or ideas . . . ask for information or advice (thereby transforming the recipient into an "expert") . . . seek an appointment to discuss some matter of mutual advantage . . . go on record as approving or disapproving some contemplated course of action . . . take a "survey" . . . comment on trends in your profession or industry.

• *Participate.* By taking part in various activities, you will soon become a familiar figure in those circles interested in what you are doing. Get in on company, industry or professional projects—trade shows, publicity campaigns, conventions.

Be a joiner—you can often meet otherwise unreachable people in civic, fraternal and veteran's organizations. Volunteer your services—as a Boy Scout leader, Civil Defense worker, an unpaid fireman, member of a charity drive, head of a church bazaar.

Oscar Wilde said it. You remember it: "The only thing worse than being talked about is not being talked about!"

**The Magic of Asking.** There's precious little you can do without facts. But once you have them, you can make sound decisions, plan ahead, acquire "know-how" in a hundred different directions.

But the facts you need aren't always readily available. What do you do then?

One oft-overlooked answer can best be illustrated by the following story:

For years, historians of World War II had been wondering why the Jap-

*(Continued on page 34)*

### Some Facts of Life

**Ever wonder about your future? Here's good news:**

**Your own life expectancy increases with age.**

**If you are now 20 years old, you can expect to live to be over 72 years old.**

**If you are now 40, you can expect to live to be over 74.**

**If you are now 60, you can expect to live to be over 76.**

**If you are now 80, you can expect to live to be over 86.**

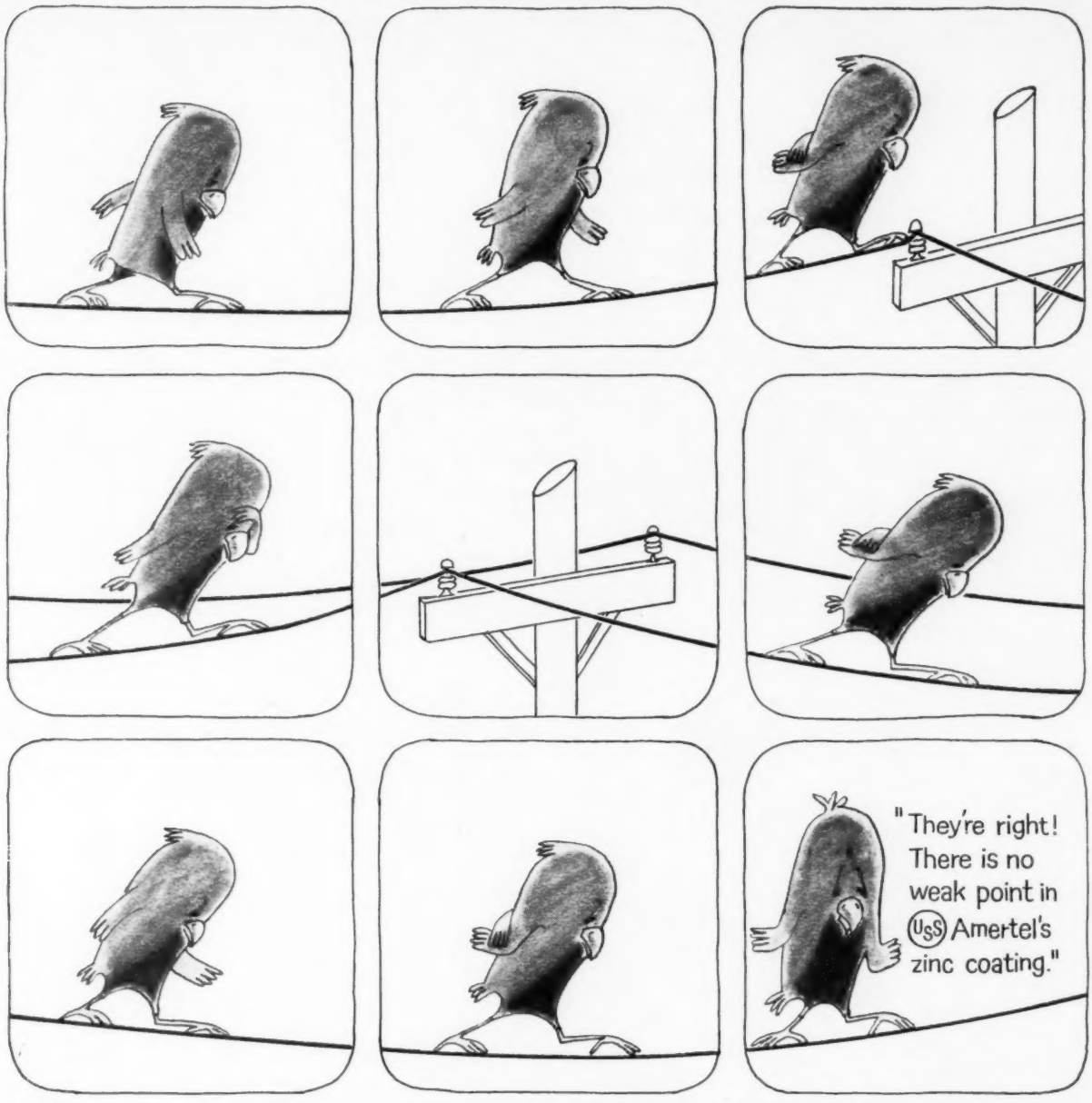
**If you are now 85, you can expect to live to be over 90.**

**Less than three people in every hundred born will die in this year or any year.**

**Your chances at 60 are 7 in 10 of reaching 70.**

**Your chances at 70 are 5 in 10 of reaching 80.**

**Your chances at 80 are 3 in 10 of reaching 90.**

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- Easy adaptation to automatic toll ticketing—and Strowger ticketing equipment works directly into accounting machines without converters
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- Low maintenance; fast call tracing
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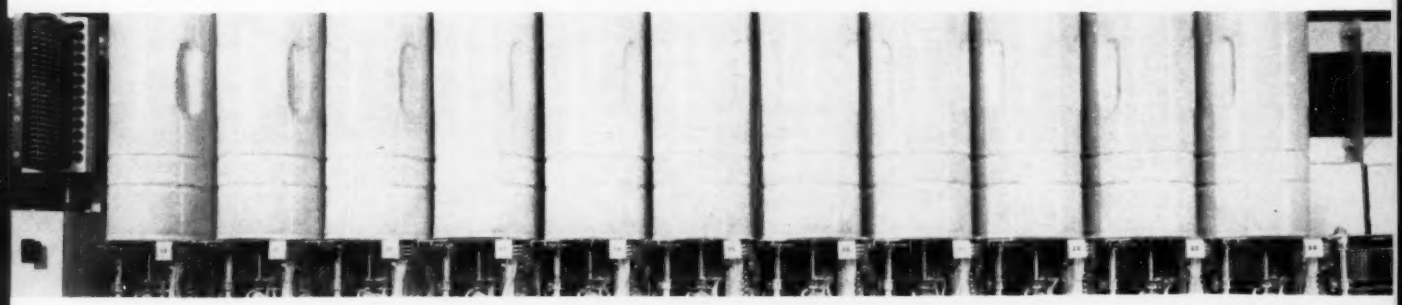
- Either frequency-per-group or frequency-per-terminal, with terminal-per-station operation
- Trunk repeaters for carrier, microwave, physical, or composite circuits
- Full-feature toll boards—cord-type or cordless
- Fire-reporting systems—manual and automatic
- Quick, easy testing of lines for leaks, grounds, or foreign battery, with the Automatic Line Insulation Routiner
- Remote testing of unattended offices
- Fully automatic alarm systems within office and at remote points
- "Four-wire" toll switching
- Toll restriction for P-B-X and P-A-B-X systems



# the best decision, Harry—

## Strowger will meet your future needs!"

Wayne Leonard* is a funny guy. He insists that he doesn't sell dial equipment. Wayne says that he sells the solution to future communications needs. And if you think that's odd, just listen to the way that he sells our switching equipment...

First, Wayne urges the customer to be cautious. He reminds the telephone man that the system installed today may have to trunk into different types of equipment and provide new services tomorrow. Then comes the clincher—he proves that Strowger is more than a match for the future. How? By simply explaining the many modern features that Strowger can provide (listed above).

Are you planning a dial conversion? Then get in touch with us. We'll send *your* AE representative in to help you solve your dial conversion problems. He can give you the complete Strowger story. And, he can provide you with information on how to finance Strowger dial equipment. To contact your AE representative, just write Automatic Electric Sales Corporation, Northlake, Illinois. In Canada, Automatic Electric Sales (Canada) Ltd., 185 Bartley Drive, Toronto 16.

**District Manager, North Central District, Automatic Electric Sales Corporation*

**AUTOMATIC ELECTRIC**

Subsidiary of

**GENERAL TELEPHONE & ELECTRONICS**

GENERAL SYSTEM

anese Admiral commanding a large part of the Imperial Fleet at Leyte Gulf never committed his forces in that historic battle. Every history of the war in the Pacific merely guessed at the reason.

But in 1958 a 16-year-old boy did what none of the "experts" had thought of doing before. He sat down and wrote a letter to the Admiral, who was still living in Japan, and *asked him.* Soon the boy had an answer from Imperial Naval Headquarters in Tokyo.

Admiral Kiyohichi Shima's explanation was so simple, it had never occurred to the experts. His fleet was the last one Japan had, he said. If he lost the battle, he would also lose the whole war for Japan. He simply couldn't afford the terrible risk. The boy got his facts, and the experts got a new footnote for the history books.

Try it yourself. Next time you're looking for an elusive fact, check with an expert by telephone or letter. It could save you a bale of red tape and hours of fruitless research.

**Tax-Deductible Contributions.** Whether you're winding up your tax records for this year, or starting new ones for the next year, it's a good idea to refresh your memory on what contributions are deemed deductible by the government. Here's a rundown on the organizations that currently qualify:

Y.M.C.A. (Y.M.H.A.)
Y.W.C.A. (Y.W.H.A.)
Girl Scouts
Boy Scouts
Red Cross
American Cancer Society
United Fund
Red Cross
Church
Community Chest
Local hospital fund
U.S.O.
CARE
American Bible Society
S.P.C.A.
Salvation Army
Jewish Welfare Board
Local Museum
Public Library
Planned Parenthood
National Foundation

Almost any nonpartisan scientific agency.

Almost any college or school (excepting athletic scholarship funds).

Fraternal organizations—providing the contribution is to be used exclusively for charitable, religious, educational, literary or scientific purposes.

Domestic veteran's organizations, providing they are non-profit.

### Need a Check In a Hurry?

**Did you know that a check can be written on almost any kind of material, as long as it's legally worded and is negotiable? It's a fact!**

**Checks have been written—and cashed—on cigarette paper, on egg shells, on box tops—even on business cards. The federal law on which your use of checks is based stipulates only that a check must be signed by a maker or drawer and contain an unconditional promise to pay on demand or at a fixed future date.**

**What does this mean to you? Just this: If you've ever been embarrassed by inability to pay a bill because you've forgotten your wallet and check book, you can improvise a perfectly legal check on the spot—providing, of course, that you have the money with which to back your "promise" in your checking account.**

**(Some salesmen, incidentally, use this little-known fact to pin down the prospect who says, "I haven't a check handy.")**

**How a Genius Got Others To Do Their Best.** One of the few men ever to be paid a salary of a million dollars a year was steel magnate Charles Schwab. What made him worth *$20,000 a week* to Andrew Carnegie?

Not his knowledge of steel. Many men knew just as much as Mr. Schwab; some knew more.

Not his knowledge of finance. He was no great shakes in that department.

One thing alone made Mr. Schwab worth the fortune he was cheerfully paid. "Charlie has a positive genius for handling men," Andrew Carnegie explained.

That genius was never more in evidence than when Schwab was faced with a mill manager whose production record was very poor.

"Why," he asked, "can't a capable man like you get your men to meet their quotas?"

"I wish I knew," the manager replied. "I've tried everything—coaxing, yelling, swearing. I've pleaded with them and I've threatened them. Nothing seems to work."

"Give me a piece of chalk," Mr. Schwab said. Then, turning to one of the workers, he asked, "how many heats did your shift make today?"

"Six," the man answered.

Mr. Schwab chalked a large *6* on the floor and walked away.

No sooner did the night shift report for work than they saw the big *6* on the floor. What did it mean, they asked.

A day man explained.

The next morning, when Schwab toured the mill again, he found his *6* gone. The night shift had rubbed it out and replaced it with a larger, bolder *7*.

The significance of the new number wasn't lost on the day shift. Their dander up, they got down to work in earnest. When they quit that night they rubbed out the *7* and in its place left a swaggering *8*. The night shift answered with a *9*. The next day shift really pitched in and chalked up an enormous *11*. It wasn't long before that mill was the company's top producer.

"The way to get things done," Mr. Schwab explained, "is to stimulate competition. I don't mean only in a money-getting way, but in the desire to excel."

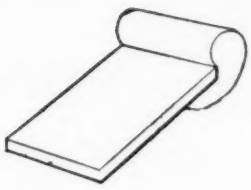
Next time *you* must get something done through others and nothing seems to work, try throwing down a challenge. Few people can ignore it.

**Six Things Car Owners Need.** The average driver considers himself prepared for all eventualities if he has a jack, some sand and a windshield scraper in his trunk. But emergencies don't always follow a pattern. To play safe, stow the following oft-overlooked gear (or reasonable facsimiles) as well:

- A flat stone to rest the jack on in case it's necessary to change a tire on soft ground.
- A couple of 4-inch wooden wedges or blocks to put behind the wheels to prevent the car from rolling if it must be jacked up on a hill.
- First-aid-kit.
- Flashlight.
- Tire gauge, because most gas stations don't calibrate theirs, and a check of tire inflation every 10 days or two weeks may uncover slow leaks before they lead to blowouts.
- Government-surplus nylon webbing (8000-pound test) which makes an excellent, light, easily-tied tow line.

**Eight Rules for a Profitable Day.** (1) Be decisive. (2) Act promptly once you decide what to do. (3) Proceed with confidence. (4) Concentrate on the task. (5) Keep your goal constantly before you. (6) Start some one thing every day. (7) Set a standard of accomplishment for each day, and keep going until the job is done. (8) Do it Now.

# The Plant Man's NOTEBOOK



By RAY BLAIN, Technical Editorial Director

THE AMERICAN Telephone & Telegraph Co. has reissued the blue book, "Notes on Distance Dialing 1961". In the foreword of this new edition, it is pointed out that these notes outline technical requirements and fundamental principles of operator and direct (customer) distance dialing. This is a revised edition of "Notes on Distance Dialing—1956" which superseded the earlier "Notes on Nationwide Dialing—1955".

The new edition states further that in the period since the 1956 "Notes" was issued, several suggestions have been made to include additional material and to expand and clarify the discussion on certain subjects. In this interval, too, there have been some changes in basic plans. This new issue incorporates these suggestions and changes, as well as the refinements and editorial changes made to clarify many items and statements.

Consistent terminology throughout, particularly with respect to designating the trunks in the distance dialing network, is noted. The terms, "intertoll" and "toll connecting", are used to designate the two major categories of trunks in the network, except where transmission design is discussed. With reference to transmission design, the terms "intermediate" and "terminal" are used respectively for these two trunk categories.

The foreword, in closing, states that planning for distance dialing involves the entire telephone industry. Accordingly, personnel of all telephone companies participating in distance dialing should find these notes interesting. The importance of early and continuous joint planning by Independent and Bell companies cannot be overemphasized, since the plans of one are bound to affect the plans of others. In this connection, information from technical meetings of representatives of USITA's Technical Subcommittee on Direct Distance Dialing and representatives of the American Telephone & Telegraph Co. are of interest, and serve as worth-while supplements to the "Notes".

Independent companies may obtain copies of the new "Notes" from their nearby associated Bell companies.

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The Lincoln (Neb.) Telephone & Telegraph Co. got into the television receiving business recently as the result of the unusual rules set up for a new housing development. These rules specified: "No overhead lines or obstructions, including TV antennas." This ruling made a community TV antenna necessary, and that's where LT&T got into the act.

This company has constructed a large master antenna at the edge of the development. It is equipped to pick up the major channels serving the area. Buried coaxial cables are extended from the tower to serve the houses in the new development.

Residents of the area who wish to obtain near-perfect reception of the various channels subscribe to the master antenna hookup. Subscribers do this in much the same manner as they arrange for their regular telephone service.

The telephone company arranges for extending the coaxial cable to each house, maintains the tower and allied equipment, and otherwise makes certain that the television signal is properly routed to each home.

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General Telephone Co. of Kentucky recently completed plans to install seat belts in all company vehicles to further employe safety on the job. A total of 248 vehicles are involved in the plan. Autos and trucks serving in the "over-the-road" capacities will be first to receive the belts; then other vehicles on a selective basis. This company's motor fleet travels more than 3 million miles per year.

Included in the new program is the offering to employes of seat belts, through the company's employe store, at a very reasonable price. Employes are urged to take advantage of the low cost offer to make their off-the-job driving safer. The seat belts being offered to employes are the same type, and are at the same price, as those purchased by the company.

The belts are approved by the General Services Administration and meet the standards of the Society of Automotive Engineers.

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Two telephone advertising novelty items recently placed on the market are certain to attract considerable attention.

One is a set of four trays in a "Gold-N-Brass" frame. The trays are smoke-crystal glass with the history of the telephone etched in gold. They are man-sized, deep bend (6¼ inches x 4¾ inches x 1 inch). With this arrangement, each guest can have his own individual ash tray at conferences or parties.

The other item is a blossom pen. This is a slim, neat ballpoint pen with an attractive blossom at the top. This pen, when not in use, can be placed in a flower pot base. Or, pens without the holder can be furnished and shipped 100 in a decorative basket. The single pen with base is shipped packed in a polyethylene bag.

•

Ten years from now, automobiles with private telephones will no longer be considered a luxury. They'll be commonplace. And the driver will be able to communicate via his auto telephone without removing his hands from the wheel.

This prediction was made by Arthur

J. Runft, director of commercial electronics engineering for AC Spark Plug Division of General Motors, at a forum for vehicular electronics at Milwaukee, Wis. recently.

He further predicted that truly mass public telephone service between ground stations and flying aircraft will begin to be a reality within a year and that a skyphone system is now available by which telephone calls can be made to and from airplanes flying within a 200-mile range of New York, Pittsburgh, Washington, Chicago and Detroit. By 1964, he said, the ground-to-air service will be expanded to about 70 ground stations throughout the country.

Mr. Runft indicated that a number may be assigned to a personally carried telephone which could be removed from the car and taken along by the driver wherever he went.

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Last August, the Gulf Telephone Co., in special ceremonies, converted its Perry, Fla., exchange to dial operation. This event marked the conversion of Florida's last manual exchange.

This makes Florida the fourth state in the union, and the first in the South, to be 100 per cent dial.

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A six-volume, 776-page set of books titled: "Basic Radio" should be in the library of all communications men who have a desire to improve their knowledge. This set of books, authored by Marvin Tepper, can be purchased from TELEPHONY in either soft cover at $13.85 or cloth at $14.85.

These books combine the final development of the author's notes as an instructor in radio and television with the familiar Rider "pictured-text" technique of one idea to a page, reinforced by at least one powerful teaching picture. The fundamentals of radio communications are clearly and accurately explained.

The course, written at the technical institute level, endeavors to present the subject in a manner that anyone can grasp with speed and ease regardless of his level of education. This is accomplished through carefully selected language and carefully thought-out presentations, reinforced by more than 700 illustrations, each conceived and selected for its ability to make an idea readily understandable.

While the six-volume "picture text" course collectively offers a complete and comprehensive course in radio communications, the course may be purchased by the individual volume also so that the student, technician or hobbyist can update or improve his knowledge in any one area of communications covered by the course. Titles and prices are as follows:

Vol. 1. "DC Electricity," 144 pages ..... $2.70
Vol. 2. "AC Electricity," 144 pages ..... 2.70
Vol. 3. "Electron Tube Circuits," 144 pages ..... 2.70
Vol. 4. "AM and FM Receivers," 128 pages ..... 2.50
Vol. 5. "Transistors," 72 pages ..... 1.90
Vol. 6. "AM and FM Transmitters," 144 pages ..... 2.70

**"Cross Talk"**

It is claimed that the younger generation has a greater need for models than critics.

# Learning By Not Doing

**By C. C. MAY***

A FEW YEARS AGO in England lived Lamorna Birch, an artist and painter of world renown. Many of his paintings were shown in the Royal Academy in London.

One of his paintings is called, "The Quarry Team," and it depicts two shire workhorses pulling a heavy wooden cart on which large granite blocks are loaded.

A young school boy was fortunate to have a reproduction of this picture hanging on the school wall outside his classroom, because it resulted in a turning point in his life.

One day in school during a music class he was, to coin an expression, "acting the goat", and was sent out of the classroom by the teacher.

This had been his plight many times previously, and each time when the headmaster spotted him, he was made to go to the study for punishment.

On this occasion, however, the headmaster once more saw his most apt pupil standing in the hall, and as he walked toward the boy he asked why he was outside his classroom during the music period.

The young boy answered, "I was acting the goat, sir."

The headmaster turned around, looked at the picture of "The Quarry Team" and asked the boy to glance at the picture and tell him what would happen if one of the horses slacked off from pulling the heavy load.

The lad thought for a moment, then remarked that it would be harder on the other horse.

The headmaster looked straight into his eyes and stated, "That is exactly what you are doing in class by not pulling your weight."

The boy returned to the classroom with the picture of the quarry team burned in his memory, and never again did he receive a caning from his headmaster.

C. C. MAY

He learned a great deal that day—"He learned by not doing." The school boy never forgot that meeting many years ago in the school hall, and the quarry team picture is still very vivid in his imagination.

How do I know all about this event? It is quite simple; I was that same boy.

This story has an application for all of us in the telephone industry, inasmuch as we all make mistakes, which is only normal since we are only human.

In the Golden Book of Life let us put both our accomplishments and failings in its ledgers, so as we progress through life we may glance back and recall our failings as well as our accomplishments.

A president of a company once explained to a junior executive, "If mistakes you must make, I will back you 100 per cent, as long as your mistakes only total 49 per cent and your accomplishments total 51."

*Mr. May is commercial sales engineer for the Elyria (O.) Telephone Co.

THE

# OPERATOR'S CORNER

By MAYME WORKMAN, Traffic Editor

"THAT OPERATOR will be the death of me yet," a chief operator confided to me one day as we were driving home from a group meeting. Then the chief operator proceeded to tell me all about Mary.

Mary, it seems, didn't have any talents that could be put to use in a group conference. She was a daydreamer, who always seemed to forget what she was supposed to do, or where she was supposed to be. She seemed to be always on "cloud nine," without too much contact with reality. In a group or classroom she usually required 10 times more patience—and concern—than the other operators.

You sometimes wonder, my friend said, how she can sit through frequent meetings without anything seeming to rub off. She seems to be a drag on the group. How can one person be so obviously lacking in ability? She certainly is no intellectual. Her contribution will never be along those lines.

**Some three** months later, the chief operator and I were again discussing Mary's progress.

"Funny thing happened the other night," the chief operator began. "We decided to have a new member drive in our club. Everyone was asked to bring a new member to the next meeting.

"On the night of the drive, Mary brought 10 new members to the meeting. Everyone was amazed, not only that the "talentless one" had done something for a change, but to discover that she had such influence."

**Some people** have clearly evident talents; others are slow to reveal theirs, perhaps because they never really had an opportunity to discover them or to develop them. That there are so many varied talents—gifts from God—in the human race is part of what makes life interesting. Rather than too hastily judge a person, because she seems to lack this or that capacity, we ought to stop and ask ourselves whether we really have tried to help her discover her capabilities.

More than that, we ought to make some hard-headed appraisals of our own situation. Do we know our own talents? Are we consciously trying to discover them? And if we have discovered them, are we developing them? Are we thinking about putting them to the service of our fellowmen? Or, do we plan to use them selfishly for our own ends, with little or no concern that they were given to us for a special reason. God gave them to us, not to hide under a bushel, not to bury, but to increase and to give them back to Him at the end of our life, in all their perfection. These are soul-searching questions.

Once we have our goal in life firmly fixed, we will have to achieve it through the use of the gifts given to us. There is no other way.

**The chief operator** and the members of the club were slow to recognize the talents of one of their members, but they are to be commended for their patience. In due time, the "talentless one" blossomed forth and made her full contribution.

Fortunate are they who discover early in life where their talents lie. And it isn't too difficult to find this out if we simply stop to analyze our interests in school, in our reading, in life in general from the time we were children and on up. What were the things we liked to do most when we were small? What kind of hobbies and interests did we have? Surely we can find a clue. And, when we find the direction in which our talent lies, we will be more inclined to go to work.

My dear Dad used to say, "You can never tell from looking at a frog how far he can jump," and I believe this is true of humans as well. Sometimes the quiet person, who sits back and permits others to do all the talking, has much more ability than the loquacious person.

**Each person** is an individual and everyone's habits, disposition and manner are different.

A friend of mine remarked, "My neighbor's husband said, 'When I retired I thought my wife should enjoy my retirement, too, so I always wash the dishes after each meal and take care of my own room.' "

My friend thought this was a good idea, and I could tell that she thought her husband should emulate the neighbor's action. Knowing her husband as I do, I said, "Now don't get any ideas. Your husband is not going to wash the dishes for you after every meal because he would not see eye-to-eye with you on such a deal, but he will do many other nice things for you."

Don't sell short the operator who seems slow in grasping instructions. She may prove to be one of the best operators on your force.

## Traffic Questions

(1.) Is a proper understanding and application of the best principles for handling cords of great importance?

(2.) What benefits are derived from correct cord handling?

(3.) How should cords be selected at outward positions in offices equipped for cord service observing?

(4.) If an outward operator recognizes in advance that a call does not require timing, which pair of cords should be used?

(5.) Explain the correct method of rotating cords.

*Answers to questions are on page 45.*

## Vicious Cycle

"Capital punishment occurs when the government taxes you to get capital in order to go into business in competition with you and then taxes the profits on your business in order to pay its losses."—Anonymous.

## "We"?

"When you hear some folks you know blow and brag, you are reminded of the time the flea said to the elephant, 'Boy, didn't we shake that new bridge when we crossed it!' "—*Goodland News.*

# Courts and Commissions

## Tariff Amendment to Reduce Revenue in N.Y. by $13,200

The New York Public Service Commission has accepted a tariff amendment filed by Rochester Telephone Corp. designed to reduce charges to certain subscribers by an estimated $13,200 annually. The new schedule becomes effective on Dec. 3 (TELEPHONY, Nov. 25).

Under it, calls between the company's exchanges at Brockport and Hamlin will become toll-free with a resultant saving of about $9,000 annually to subscribers in those two areas.

Boundary and dial conversion changes affecting the East Rochester-Pittsford exchange area (404 subscribers) will further reduce company revenues by $4,200 annually.

The company noted also that the extension of toll-free service to the Spencerport and Hilton exchanges of Ogden Telephone Co., Spencerport, on Dec. 3 will cause it a further loss of $36,000 in toll revenues.

## Authorize Toll Free Service, Rate Raise in Pennsylvania

The Pennsylvania Public Utility Commission authorized Bell Telephone Co. of Pa. and Conestoga Telephone & Telegraph Co., Birdsboro, to eliminate a 15-cent toll between Bell's Reading exchange and Conestoga's Birdsboro and Yellow House exchanges effective Dec. 1.

The move saves 65,000 subscribers an estimated $113,200 in tolls yearly. The Conestoga company will raise regular monthly rates of 4,712 Birdsboro and Yellow House subscribers by $65,184.

Reading subscribers' rates will remain unchanged, and they will save $48,715 in tolls yearly.

## Receive Two Sale Requests, One Rate Request in Wis.

The Wisconsin Public Service Commission on Dec. 4 was to have heard the petition of the Rudolph Telephone Co. to sell to the Wood County Telephone Co., Wisconsin Rapids.

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On the same date, the commission was to have heard the application of Chibardun Telephone Cooperative, Inc., Dallas, for authority to raise and change its rates.

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The Wisconsin commission on Dec. 6 was to hear the request of Arena & Ridgeway Telephone Co., Arena, to sell to the General Telephone Co. of Wisconsin, Madison.

## Ask Rate Increase for Dial Service in Mich. Expansion

The Michigan Public Service Commission on Nov. 28 was to have heard the petition of the Rural Telephone Co., Stockbridge, for a rate increase for its Munith and Rives exchanges.

The Rural company plans dial service as soon as installation can be completed. Munith has already been cut over, and the company seeks to put the new rates, when approved, into effect there on Jan. 1, 1962.

L. G. Keeper, secretary of the company, stated that the requested rate increases would establish identical rates at all exchanges having dial service. Rives subscribers would get no raise until cut-over.

Rural serves Fitchburg, Gregory and Webberville, in addition to Munith and Rives, and has negotiated for the purchase of the Tompkins and Onondaga exchanges of the Grand Valley Telephone Co.

Present and proposed rates, as shown by Rural, are as follows:

| | *Present* | *Proposed* |
|---|---|---|
| One-party residence | $4.50 | $6.00 |
| Four-party residence | 3.50 | 4.25 |
| Multi-party residence | 3.50 | 4.25 |
| One-party business | 7.00 | 8.00 |
| Multi-party business | 5.50 | 5.50 |

## General of Upstate N.Y. Asks Rehearing on Rate Order

General Telephone Co. of Upstate New York, Inc. Johnstown, on Dec. 1 filed a petition for a rehearing of its rate increase request with the New York Public Service Commission (TELEPHONY, Nov. 11).

The Commission recently rejected over 60 per cent of the company's original request for $800,000 in added annual revenue, but has approved a reduced tariff amendment which allows a $310,000 increase, effective Dec. 6.

Marshall K. Taylor, president of the company, pointed out that after state and federal taxes, only $140,000 of this reduced amount will remain to aid in financing service improvements, and to meet "ever rising" financial obligations of the company. He said: "The lower increase authorized is restrictive to the company in its ability to provide the public with the service it increasingly demands."

In its petition for a rehearing, the company cited the commission finding "unjust, unreasonable, and unlawful," and termed "arbitrary" the method used by the Commission in reaching conclusions on several items.

The items questioned by the company include the Commission finding in respect to determining the rate base; purchases charged to expense; affiliate company interests; and the company's rate of return on investment.

The company requested in its petition that it be permitted to present additional evidence and argument at a rehearing that will conclusively prove its financial requirements.

## Telephones Inc. Asks Ky. Merger OK; Ia. Consolidation

Telephones, Inc. of Chicago, Ill., has requested approval of the Kentucky Public Service Commission to merge Calvert Telephone System, Inc., Kentucky Telephone Co., Augusta; Mammoth Cave Telephone Co., Park City; and Northeastern Telephone Corp., London, into one operating company known as Kentucky Telephone Co., according to Perry D. Woodward, president of Telephones Inc.

The board of directors and the common stock shareholders of each of the four companies have unanimously approved the merger which will become effective Dec. 31, pending commission approval.

It is reported that Kentucky Telephone Co. then will be the second largest Independent telephone company in Kentucky with combined assets of over 11½ million dollars and serving approximately 19,000 telephones through 37 exchanges.

Significant operating economies

are expected to be produced as a result of the merger. The system is 100 per cent dial.

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Telephones, Inc. also announces that it is proceeding with the merger of Eastern Iowa Telephone Corp., Independence, into Iowa State Telephone Corp., Centerville; to become effective Dec. 31. After the merger is completed, the surviving corporation will provide service to over 7,000 telephones in the state of Iowa.

Telephones, Inc. was incorporated in July, 1960 and represents a consolidation of the ownership of a number of telephone properties.

A public offering of 250,000 shares of common stock of the company was made in September, 1961, and the common stock is now quoted in the over-the-counter market.

In addition to properties in Iowa and Kentucky, other subsidiaries of Telephones, Inc. operate in Kansas and Illinois. The Kansas subsidiary participates in furnishing communication facilities to the Atlas Missile Base Complex near Topeka, Kan.

## Seek Stock Acquisition Sale, Raise Approvals in Mo.

The Continental Telephone Co. has asked the Missouri Public Service Commission for permission to acquire more than 10 per cent of the common stock of the Buffalo Telephone Co.

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The commission also has before it the application of Tina Telephone Co. to sell to the Green Hills Telephone Corp., Breckenridge.

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Also in Missouri, the commission on Jan. 8 is to hear the application of Northeast Missouri Rural Telephone Co., Green City, to raise rates.

## Transfer of Telephone Franchise Protested in Tex.

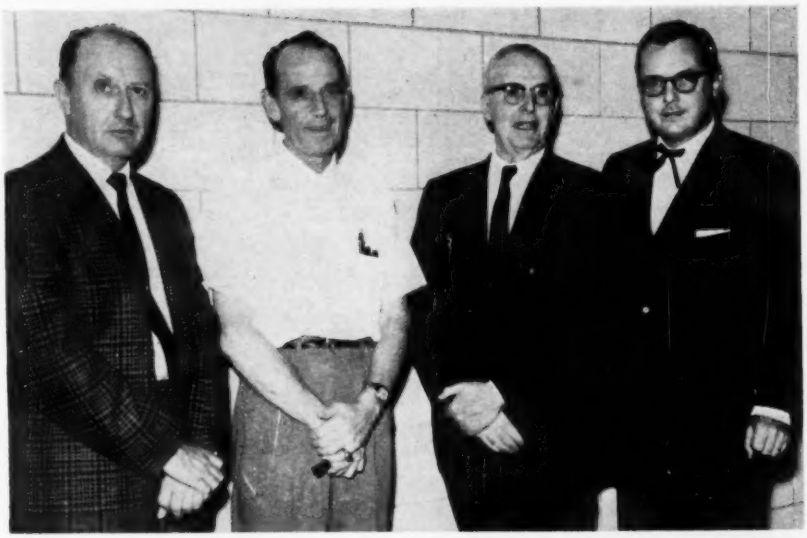
The Lancaster (Tex.) Telephone Co. has sold the Lancaster exchange to the Nortex Telephone Co., Inc., Dallas, it was reported on Nov. 20.

However, the Lancaster City Council has not yet approved transfer of the local telephone franchise.

A group of citizens is protesting the transfer because they feel it will delay the provision of direct dialing to the city of Dallas, which is served by Southwestern Bell Telephone Co.

## OK N. C. Stock Dividend

Oldtown Telephone Co., Winston-Salem, was authorized by the North Carolina Utilities Commission on Nov. 29 to issue common stock dividends totaling $110,000 which will be distributed to stockholders of record Nov. 30 (TELEPHONY, Dec. 2). The company serves Oldtown, Lewisville, Rural Hall, Stanleyville and King, all in the Winston-Salem area.



**Above Photo: Photographed at the exchange of the Nocona (Tex.) Telephone Co. are, left to right: D. M. Robb, general manager of Electra (Tex.) Telephone Co.; D. G. Gardner Jr., vice president of the Nocona company; J. B. Haley, secretary of the Texas Telephone Association, and George Summerscales Jr., of Automatic Electric Co. Right Photo: Mr. Gardner (right) and Roy Rea, engineer, discussing the cut-over in Mr. Gardner's office in the new Nocona central office building.**

## N. Y. Installer Rescued Man from Fire, Gets Medal

A New York Telephone Co. installer, Thomas R. Woodford on Dec. 1, was awarded the Vail medal—for courageous action in rescuing a semi-conscious man from a blazing hotel.

Mr. Woodford, 27, of Syracuse, became the company's first medal winner in three years when he received the bronze award from Benjamin H. Oliver Jr., vice president of the company's upstate territory.

Among those at the ceremony was the man Woodford saved, 50-year old Anthony Kukys, owner of the Apulia Station Hotel, which was enveloped in flames early in the morning of Apr. 14.

Woodford, chief of the Apulia Volunteer Fire Company, went into Kukys' smoke-filled room, carried the unconscious man to the window and shared his oxygen mask as Kukys was carried to safety down a ladder. Woodford suffered from severe smoke inhalation.

## MST&T Colo. Vice President

James H. Miller has been named Colorado vice president and general manager of the Mountain States Telephone & Telegraph Co. He was formerly the company's assistant vice president-operations. Mr. Miller succeeds Harold A. Snyder who has joined American Telephone & Telegraph Co. in New York as assistant comptroller.

## U.S. Asks U.N. Cooperation In Study of Outer Space

The United States on Nov. 28 proposed a plan to the United Nations as a first step toward insuring that the exploration of space would be used for the betterment of man, The New York *Times* reports.

The plan called attention to the possibilities of gaining new insight into the mysteries of the weather through a series of meteorological satellites and of improving international understanding through a network of communications satellites.

Part of the plan stressed the vital role the United Nations could play in helping the world to share in the study of space and the benefits from the discoveries, however modest their scientific or economic development.

Charles W. Yost put the United States program before the United Nations Committee on the Peaceful Uses of Outer Space in an apparent search for a new sense of cooperation between the Communist and Western worlds.

Ignoring the United States plan, the Soviet Union quickly indicated that the United Nations would have little opportunity to influence any space activities unless it did so on Moscow's terms.

Today's meeting was the first for the 24 nation committee. Formed nearly two years ago at the unanimous recommendation of the General Assembly, the committee had been trying unsuccessfully to convene in the face of a Soviet boycott and Soviet attacks on its purposes and structure.

As Mr. Yost presented it, the United States plan would do the following:

It would acknowledge that the international law and the United Nations Charter "extend to the outer limits of space explorations."

It would have the United Nations Secretary General establish "a central registry of space vehicles," maintaining a record on all space launchings and transmitting data to members at their request . . . .

It would use communications satellites as orbiting relay points to form a global network available to all nations, and ask the International Telecommunication Union to consider at its 1963 space conference "those aspects and give special attention to help needy countries develop the facilities for making use of the new network . . . ."

## Obituary

Osby A. Logue, 77, president of C. T. & N. Telephone Co., Casey, Ill., died unexpectedly on Nov. 12. Death was attributed to a heart attack.

A life-long resident of the Casey area, Mr. Logue had served as president of C. T. & N. company since its inception in 1912, when he and Mrs. Logue purchased the Toledo Telephone Co., the first of six exchanges which subsequently became the C. T. & N.

O. A. LOGUE

A member of the Independent Telephone Pioneer Association, Mr. Logue was active until his death in affairs of the telephone industry.

Surviving are the widow, Grace; one son, Russell, vice president of C. T. & N.; two daughters, Mrs. Paul Heil of Hays, Kan., and Mrs. Richard Rhode of Elmhurst, Ill.; and 11 grandchildren and 3 great-grandchildren. A son, Olaf, preceded him in death on Aug. 17 of this year.

## Chamber to Hold Conference On National Issues

Rep. Wilbur D. Mills (D., Ark.), chairman of the House Ways & Means Committee, is scheduled to discuss, "Tax Legislation in the 87th Congress," at the Association Public Affairs Conference, Jan. 24-25, at Washington.

Sen Barry M. Goldwater (R., Ariz.) and Sen. Hubert H. Humphrey (D., Minn.) will speak on "What Laws Should Be Passed in the Second Session of the 87th Congress", and Secretary of Labor Arthur J. Goldberg and Charles M. Brooks, director of labor relations, Texaco, Inc., will preview forthcoming labor legislation.

The conference, the first of its type, is being sponsored by the association members of the Chamber of Commerce of the United States. Its purpose is to acquaint association officers and members with major national legislative and economic issues.

Some 1,000 association members and officers are expected to attend. Besides hearing from legislative experts, those attending will have a chance to meet with their senators and congressmen at a Congressional reception.

Arthur H. Motley, chairman of the board of the National Chamber and publisher of *Parade* magazine, will also speak on "The Political Sixties and You." In addition, a movie on techniques of association public affairs committees will be shown.

The conference is open to all trade and professional associations. For more details write: Association Public Affairs Conference, Chamber of Commerce of the United States, 1615 H Street, N. W., Washington 6, D. C.

## AIEE to Hold Meeting, Show In New York Jan. 29-Feb. 2

The Winter General Meeting of the American Institute of Electrical Engineers—to be held Jan. 29 through Feb. 2, 1962, in the New York Coliseum, New York City—will feature a five-day technical program composed of 131 sessions at which will be presented 565 papers representing the work of more than 800 design engineers in every segment of the electrical-electronics industry.

The Electrical Engineering Exposition, also sponsored by AIEE, has been integrated with the technical program and will blanket the electrical-electronics field with nearly 200 product and service exhibits reflecting the industry's advancing technology.

Among the major areas of interest is the Communications Division. It will have sessions on manual and automatic switching facilities, communication signal transmission, transmission of data to and from data processing machines, radio communication systems, telegraph equipment, television equipment, telephonic systems, and systems for communicating with man-made objects in outer space.

Another major area of interest is the Science and Electronics Division. It will devote 14 sessions to the design and behavior of electronic devices and eight sessions to the design, construction and operation of computing devices and machinery.

Other sessions in this division will be concerned with electrophysics, electrical insulation and dielectric phenomena, magnetic amplifiers and other nonlinear magnetic devices, extended surface semiconductor rectifiers and solid state devices.

Questions about the AIEE Winter General Meeting should be directed to C. Robert Gruver Associates, 1913 Walnut St., Philadelphia 3, Pa.

Detailed information about the Electrical Engineering Exposition may be obtained from the Reber-Friel Co., 117 South 17th St., Philadelphia 3, Pa.

## TELEPHONY Reminded to Add Area Code; Others, Too

TELEPHONY had a call last week from an Ohio telephone man who wondered why our telephone number, which always appears on the contents page, did not include the area code. We made this desirable addition beginning with the Dec. 2 issue. TELEPHONY's former number was WAbash 2-2435; now, under All Number Calling, including the DDD area code, the number is 312-922-2435.

Our caller went on to say it surprised him that so many advertisers don't include their telephone number (and area code) in their address. Probably an oversight, we expect; but, when dealing with telephone people, it is doubtless desirable to encourage the use of the telephone.

## London Museum Marks 60 Years of Wireless Telegraphy

Sixty years ago - on Dec. 12, 1901 - Guglielmo Marconi became the first to send a wireless signal across the Atlantic. This remarkable achievement with primitive equipment marked the birth of world-wide communication.

To commemorate this historic achievement, a special exhibition will be displayed at the London, England Science Museum from Dec. 13 to Jan. 25. Among the many historic exhibits and original photographs, a notable feature will be a recording of Marconi's voice telling in his own words of how success was achieved.

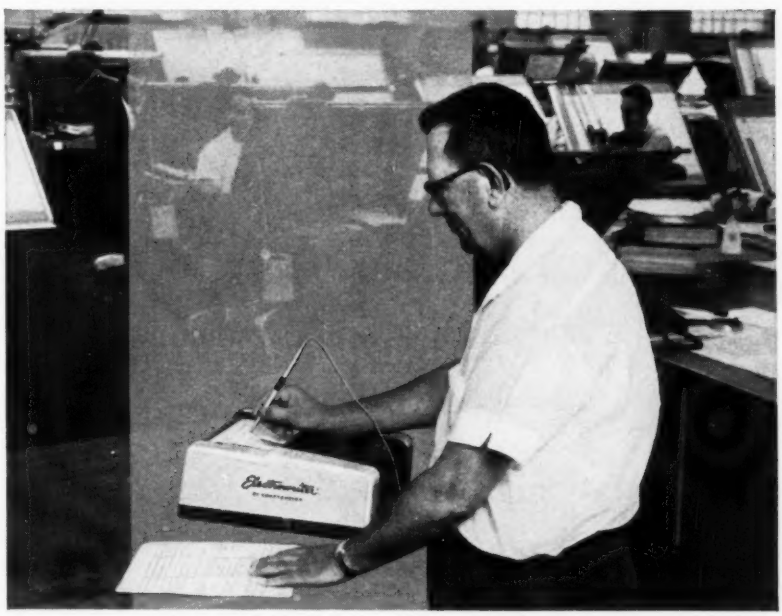
During the spring of 1900, Marconi, working in Great Britain, had succeeded in sending reliable signals from St. Catherines in the Isle of Wight to The Lizard in Cornwall, England, a distance of 186 miles. This encouraged his belief that by using larger aerials and far more powerful transmitters he would be able to achieve transatlantic distances. Scientists were highly skeptical, many said it was impossible because of the curvature of the earth.

Marconi determined to make the attempt. A transmitting station nearly 100 times more powerful than any previously constructed was built at Poldhu near Mullion in Cornwall. Enormous aerials were erected at Poldhu and at Cape Cod in Massachusetts but both were wrecked in severe gales. Another, less ambitious in design, was put up at Poldhu while Marconi and his two assistants sailed to Newfoundland where, from the top of Signal Hill, a receiving aerial was hoisted, at the third attempt, by means of a kite.

At 12:30 p.m. (Newfoundland time) on Dec. 12, 1901, Marconi and his as-


# increasing productivity at Westinghouse

Westinghouse's Transformer Division uses an Electrowriter System to reduce blueprint/document delivery time from two hours to thirty minutes. Engineers formerly spent needless time walking requests for urgently needed drawings to the blueprint and document vaults. Now, by simply writing on a nearby Electrowriter unit, such requests are instantaneously recorded, unattended, in the drawing vaults. Drawings are pulled and delivered. *Write today* for a complete explanation of this and other Electrowriter Systems. Write *Electrowriter Sales Division, Victor Comptometer Corporation, 3900 N. Rockwell Street, Chicago 18, Illinois.*



Electrowriter® SYSTEMS
by VICTOR COMPTOMETER
sold nationally to the independent telephone industry by:

AUTOMATIC ELECTRIC SALES CORP.
400 N. Wolf Road
Northlake, Illinois

LEICH SALES CORP.
427 W. Randolph St.
Chicago 6, Illinois

sistant G.S. Kemp, using one of the primitive receivers of the period with a telephone earpiece heard a faint succession of S's in Morse code. Signals from Poldhu, 2,200 miles away, had crossed the Atlantic.

## Power Wins Free Enterprise Achievement Award

Donald C. Power, chairman and chief executive officer of General Telephone & Electronics Corp., on Dec. 5 was one of 12 recipients of 1961 American Success Story Awards given by the Free Enterprise Awards Association, Inc., of New York City.

As one of a dozen selected as "examples of the success possible under America's free enterprise democracy", Mr. Power's career was described as follows (preceded by his titles as head of GT&E and its subsidiaries):

"Rural born. Earned business administration degree at Ohio State. While teaching economics there earned his master's degree in economics and later his law degree. Starting as a rate counsel for a subsidiary of the (then) General Telephone Corp. he became its president in 1951.

"With no previous direct experience as a corporate officer, his dynamic genius guided the General System over the past 10 years through unprecedented financing, mergers (Sylvania and General Telephone Corp.), diversification and expansion to become one of the world's leading integrated industrial organizations. Its annual sales and revenues exceed 1.2 billion dollars in the fields of communications, electronics, automation, lighting, research and National Defense projects. It has 53 manufacturing plants in the U.S., 11 in Canada, Europe and Latin America employing 90,000 people. Its 35 U.S. Laboratories employ 3,600 scientists and engineers.

"The General System constitutes the nation's largest Independent telephone system with 30 operating companies serving 5,600 communities in 31 states. GT&E's international telephone operations serve British Columbia, the Dominican Republic, Haiti and the Phillippines.

"Cited for his genius which in 10 years built GT&E to one of the world's largest corporations (a record in business history) and for his company's services in helping the communities and industries it serves grow and prosper."

## Incorporate in Kansas

The Madison (Kan.) Telephone Co. Inc. has been granted a charter. L. D. Harrington was named resident agent, and a capitalization of $100,000 was authorized.

## Siemens & Halske Acquires 25% of U. S. Instrument

Siemens & Halske AG of Munich, Germany, one of the world's largest manufacturers of electronic equipment, acquired an interest of slightly more than 25 per cent in the United States Instrument Corp. of Charlottesville, Va., it was announced on Nov. 24.

The American firm, a major manufacturer of telecommunications equipment, is the sole United States licensee for the import and production of Siemens & Halske telephone equipment.

"This broadening of ownership," said W. A. Rockwood, president of the American-controlled corporation, "will result in substantial benefits to the purchasers of our telephone equipment.

"The vast research and development capabilities of Siemens & Halske, which will now support the rapidly growing engineering, manufacturing, and marketing facilities of the United States Instrument Corp., will provide American customers with products and services unequalled for excellence throughout the world."

The United States Instrument Corp. organized in 1937, manufactures sound-powered telephone equipment and other communications devices. Its marketing and manufacturing relationship with Siemens & Halske began seven years ago.

## Kwal Paints, Inc. of Denver Begins $300,000 Expansion

A sales increase of 100 per cent in the last five years has led Kwal Paints, Inc. of Denver to launch a $300,000 expansion program, it has been announced by Harold Weinberg, Kwal vice president and general manager. The first two phases of construction, now underway, will give the firm a new 5,600-square-foot pigment warehouse and a new customer service center to accommodate both wholesale and retail trade.

Mr. Weinberg added: "Much of our success is due to the fine acceptance that has been given to our Kwal-Krete, the paint we developed 9 years ago to seal, protect and beautify concrete. In the grain belt across America it has had wide application on grain elevators. Many leading telephone companies are now using and specifying Kwal-Krete. And, most recently, an export market has developed. We're shipping to Australia and have a distributor now in England."

Early this year Kwal introduced a new dressing for asphalt blacktop, Tuf-Kote, which the firm manufactures in both black and colors. Kwal interior and exterior paints are available to contractors and through its own retail outlets in Colorado.

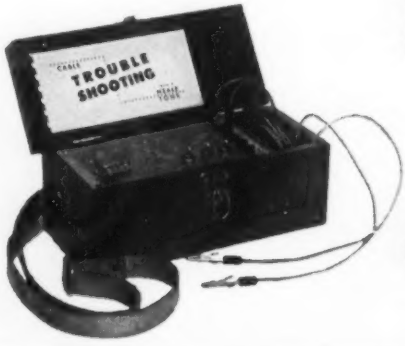

*HAVING TROUBLE WITH OPENS?*

Solve them quickly, with a Neale Troubleshooter's tone and the "Cable Trouble Shooting" booklet.

The Neale Troubleshooter's tone is an inexpensive, easy to use instrument, for talking and locating trouble in telephone cable.

The tone has circuits for high and low frequency testing, a circuit for talking, and a buzzer circuit for testing continuity.

It comes complete with batteries and four leads, all contained in a strong case



with an over-the-shoulder leather carrying strap. It weighs only 9 pounds with batteries.

JUST OFF THE PRESS: The Cable Trouble Shooting booklet has ten trouble shooting circuits, written and illustrated so the layman can understand them. We will be happy to send you a FREE copy of this booklet; just write to address below.

CABLE SPINNING EQUIPMENT CO.

3100 TOPEKA AVE.
TOPEKA, KANSAS

## IRVING, TEXAS

*Continued from page 24*

to complete the program. I'll be giving you more details on Irving telephone progress in coming months.

"Very truly yours,
W. P. ESSLINGER"

**Customers' Facts Booklet**

Next was the preparation of a customer booklet along the same lines as the employe facts booklet. This booklet had the now familiar WATCH IRVING PROGRESS design on the cover, with the subhead: *Facts About Telephone expansion in 1960, 1961 and 1962.*

The booklet gave the background for the current telephone service situation, then outlined each major project planned to solve the service problems.

The May bill insert and all others that followed would offer the booklet free by simply calling the telephone company. The booklets would also be available at the business office.

The May bill insert had the title, *"A Second Census of Irving?"* The copy went as follows:

"Yes . . . and it has already begun.

"Even before the 160,000 national census-takers started ringing doorbells, your telephone company started its own 1960 census right here in Irving.

"We're counting houses instead of people. The results will be used to develop highly accurate forecasts for telephone service . . . to your advantage. And it's an annual affair.

"Between now and mid-June, our census team will have traveled up and down every mile of street and road in Irving. Their count will determine the number of homes and business establishments which do—and do not—have telephone service. Each one will be plotted on a map of the city, divided into 19 sections.

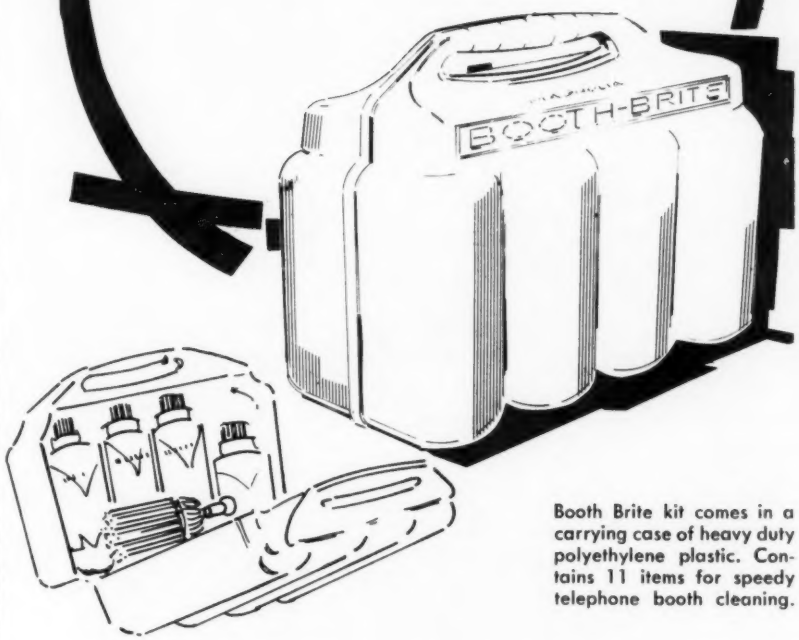
"Vacant lots will be mapped and checked against present business or residential zoning.

"In this manner, our engineers will be able to pinpoint the most likely areas of immediate and long-range telephone demand. Forecasts will indicate how many existing homes and businesses will request telephone service within a given time—and the type of service each will require. Allowance will then be made for every spot in Irving, no matter how small, where a new home or business may spring up in the near future.

"Company records contain volumes of information about today's customers. But only an actual physical count can


**NEW!**

**HANDY KIT CUTS BOOTH CLEANING TIME IN HALF**




Booth Brite kit comes in a carrying case of heavy duty polyethylene plastic. Contains 11 items for speedy telephone booth cleaning.

This brand new polyethylene carrying case contains everything needed to do a faster and better job of telephone booth cleaning. Special solvents and rust and corrosion remover bombs are all ready for instant use. By using these special materials, a maintenance man can actually clean a booth in half the time it would take him using conventional methods.

**Here's what your Booth Brite kit contains:**

1—Magnolia Telephone Booth Glass Cleaner Bomb
1—Magnolia Magna Lube Bomb
1—Spray Control Gun
2—MMM Special Cleaning Pads
2—30" Square White Rags
1—Magnathene Bomb
1—Magna-Clean Bomb
1—Magnolia Glayz-It Telephone Refinisher Bomb
1—Pint Magnolia Korrosion Rid
1—Magnolia Mag A1-3 Aluminum Cleaner and Polish Bomb
1—Whisk Broom

**MAGNOLIA CHEMICAL CO., INC.**
CHICAGO • LAFAYETTE, IND. • TAMPA • DALLAS • LOS ANGELES

**Warehouse also at Erie, Pa.**
***Order from your Telephone Supply Distributor***

determine where and what tomorrow's needs will be.

"The point is simply this: Irving has proved its ability to grow explosively. Telephone cable—fanning out from our two exchange offices, BL-2, 3, 4 and the new BL-5 now being built—must have the capacity to serve every household and business establishment in the city.

"Our 'census' will give us a clear picture of the *present*—and the *potential*.

"It's one more step in gearing Irving's telephone service growth and progress.

"W. P. ESSLINGER
"DIVISION MANAGER
"IRVING, TEXAS"

**Other Avenues Used**

There were several other advertising-public relations efforts during the March through June WATCH IRVING PROGRESS phase of the Irving campaign.

A postage meter slug with the words WATCH IRVING PROGRESS was ordered and placed in service for all Irving mailings.

During the Irving Industrial Fair, Southwestern States had exhibit space, utilizing the lobby display map showing sites of expansion work and passing out *Watch Irving Progress* facts booklets.

Company officials arranged talks to principal civic organizations on the expansion program. Several talks were made by H. N. Hammond, chief engineer for the company. Maps and charts were used to demonstrate where the improvement programs were taking place.

Publicity on progress of the expansion and improvement program was an important phase of the campaign. Stories and pictures appeared in the Irving *News* regularly.

The newspaper was very cooperative in helping the company tell of its progress and expansion through its news columns.

Thus, by the end of June, Irving people were becoming acutely aware of all the work being done to improve service. The number of complaints was beginning to decrease. The over-all feeling toward the telephone company was changing.

The next article will describe the next steps in the advertising and public relations campaign in Irving.

## CAROLINA T&T SPEEDS SPLICING

*Continued from page 25*

ied cable, with splices enclosed in terminal boxes mounted on aboveground pedestals.

**Two primary** advantages are evident in use of the self-stripping connector—its speed and ease of application and the dependability which maintenance crews have experienced in the year and one-half the connector has been in service.

In making splices, the connection is completed, insulated and moisture-sealed in one operation. The connector's transparent body makes it possible to determine if the connection is complete.

An added advantage with the new connector is the reduced training time required to develop skilled, efficient splicers. Men training to become splicers not only do more accurate work, their speed develops more quickly than with splicing methods used previously. In addition, splicer helpers are able to assist more in the splicing operation.

**The UR connector** is being used widely for line maintenance projects at Carolina Telephone. In one case, all the connections in a 2-mile stretch of 200-pair cable were replaced with the new connector when 43 openings developed in the original twist and sleeve connections within an 18-month to two-year period.

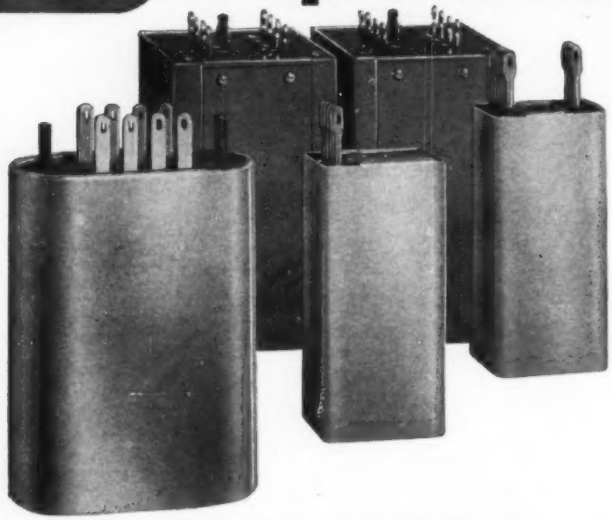
The company reported that "the effectiveness of this type of connector and the speed with which our splicers can work often makes this kind of total replacement more practical than chasing trouble calls as they continue to develop."

The connector has proved to be particularly effective in repairing damaged cable, especially at buried installations. Service can be restored more quickly than previously, and permanent repair can be provided at the same time. With the underground plant growing on an average of 6 to 8 miles daily, this method of making "trouble" splices will become even more significant in the future.

**The Carolina** Telephone system offered many advantages for studying this new type of connector. The company's lines run from hilly terrain to the seacoast, presenting at various seasons in the year all types of weather and atmospheric conditions. In the coastal area, overhead installations are subject to extreme humidity conditions and direct salt spray. Cable serving offshore locations is buried under water.

Field testing under these conditions, coupled with specially devised labora-

ADC Telephone Coils



Many are in stock. All are electrically and physically interchangeable with Western Electric. You'll like ADC's price and delivery.

Write for Telephone Coil Literature.

ADC

ADC PRODUCTS
*A Division of Magnetic Controls Company*
6405 CAMBRIDGE ST. • MINNEAPOLIS 26, MINNESOTA
PACIFIC BRANCH: *North Hollywood, California*

TRANSFORMERS • REACTORS • FILTERS • JACKS AND PLUGS • JACK PANELS

tory tests, resulted in the "Scotchlok" UR connector orginally marketed by 3M. Product evaluations conducted at Carolina Telephone, following the product's instroduction, resulted in a modification of the connector, with the entry skirt shortened one-fourth of an inch to allow more room for bundling in ready access cases. The newer, "short Skirt" UR is now the standard product—a result of follow-up development.

**Listening to the familiar voice of Daddy, who is Paul Messmer, a Jasper district repairman for the Indiana Telephone Corp., is Keith, age 11 months. While Keith cannot converse yet, he can enjoy the one-way telephone call. Sister Linda, 4, holds receiver for her brother (Photo by George R. McCormack, Vincennes, Ind.).**

## Answers To Questions On Page 37

(1) Yes, it is.

(2) Correct cord handling will insure smooth operating with a minimum of effort, and will be a material aid in maintaining good service and eliminating confusion at a position.

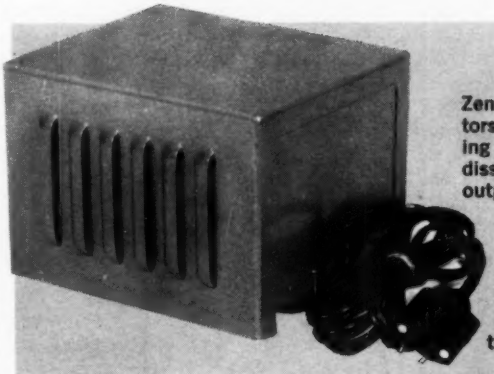
(3) Use the idle pair nearest to the calculagraph or timer.

(4) Use the idle pair farthest from the calculagraph or timer.

(5) At outward positions in offices not equipped for cord service observing, and at all inward and through positions, use the cords in rotation beginning with the first pair at the left of the position, and continuing until you have used the last pair to the right.

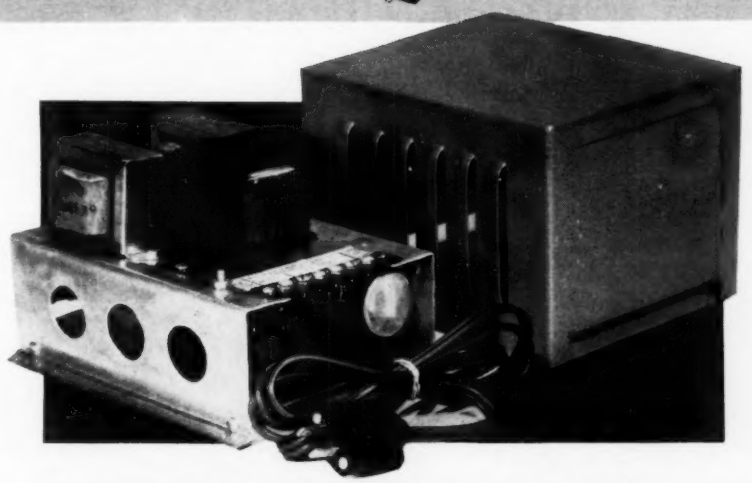

# what's new at SUTTLE

# Power Plus!



**A.C.-D.C. OR D.C. ONLY POWER SUPPLIES**

Zener diodes, electrolytic capacitors, fully fused circuits providing no more than 4 watts heat dissipation (SE-100X), and ±5% output regulation . . . 48 V.D.C. talking supply (only 5 mv. ripple!) A.C. or DC. signal output operates buzzers, bells, push-buttons, relays, lamps, chimes, other wiring plans and telecommunications devices as desired.



A versatile new signal and talk battery power source series at low costs never before offered the communications industry! Used with Suttlecom SE-5080A, 6080A, and 7080A switching keys (new Suttle small business trunking and intercom system) or for many other telephone and communications system requirements. These low cost, small power packages are housed in attractive vented, louvred cases only 6" x 7" x 5" high, easily wall mounted. Weight 9 lbs. — for continuous duty.

MODELS AVAILABLE ARE:

| Model No. | Price | A.C. Signal Supply | Amp. | D.C. Signal Supply | Amp. | D.C. Talking Supply | Amp. |
|---|---|---|---|---|---|---|---|
| SE-100X | $50.00 | 6v., 12v., 24v. 6v., 12v., | 2.0 | 48v. | .25 | 48v. | .25 |
| SE-150X | 55.00 | 24v. | 2.0 | 48v. | .5 | 48v. | .5 |
| SE-200X | 47.00 | —— | — | 48v. | .25 | 48v. | .25 |
| SE-250X | 49.00 | —— | — | 48v. | .5 | 48v. | .5 |
| SE-300X | 49.00 | —— | — | 30v. | .5 | 30v. | .5 |

f.o.b. Lawrenceville, Illinois. Write for full details today!

SUTTLE EQUIPMENT CORPORATION

401 N. 15th St.
Lawrenceville, Illinois
Lawrenceville 782

135 South La Salle Street
Chicago 3, Illinois
DEarborn 2-2108

## THE INDEPENDENT

*Continued from page 21*

The picture was produced and directed by John E. R. McDougall of Parthenon Pictures (Hollywood), in collaboration with Parthenon's executive producer-writer Charles Palmer.

The seven major acting parts were taken by able Hollywood actors. But all operating telephone roles were done by actual telephone company employes.

Plot sequences were photographed on Parthenon's stage in Hollywood. Most of the documentary action was shot in a new Independent telephone plant (Sunland-Tujunga Telephone Co.) in the nearby San Fernando Valley. Scenes of manufacturing, research and telephone usage were shot by Parthenon's field crews in various parts of the country.

A supply of prints has been deposited with Sterling Movies-USA for placement with television stations on the public-service programming. Since the film carries a warm and entertaining story and is non-commercial, expectations are for many TV bookings in desirable time slots.

Through arrangements made by the USITA, copies of the film may be purchased or rented from Parthenon Pictures, Print Department, 2625 Temple St., Los Angeles, Cal., at the following prices:

**Purchase Price**

Single color prints, each.....$125.00
Two to 10 color prints, each.....117.50
(Black-and-white prints.....Less 40%)

Prices include reel, can and case; coating and Protecto self-cleaning leader.

Parcel post, prepaid; or air-express, collect.

**Company Title Identification**

The producer will make up and attach to the beginning and end of each print, credit titles bearing the name of the purchasing or renting company, in the same color and design as the regular titles. The *head* credit will read "Your Company Name . . . One of the Nation's Independent Telephone Companies . . . . Presents". The *end* credit will read—"Your Company Name . . . An Independent Member of the Worldwide Communications Network." The cost of these credit titles will be $15 for the first set; $3.00 for subsequent sets to buyers or renters of several prints.

**Rental Arrangements**

For companies whose communities do not warrant the purchase of a print, and for non-members, USITA is depositing 50 prints with the producer for rental circulation. The rental fee is $25, check with order, and the rental period is one week, during which any number of showings may be made.

Dates will be filled in the order in which the requests are received, and there may be some delay in the first months of release. If the renter should decide to purchase the print before its return, the rental fee will be applied against the purchase price, and the company-name credit titles can be supplied.

## Space-Age Radar Creates High-Stress Environment for Men

Out on New Mexico's sandy Tularoso Basin and inside what looks like a massive 13-story golf ball, there's a strange "merry-go-round".

It is strange, first of all, because it has nothing to do with carnivals. Also, it never stops whirling. This many-sided "merry-go-round" is strange also because it can create a weird and confusing world for the few men who are permitted inside it.

In reality, the "merry-go-round" is a whirling electronic equipment room that hangs under and is attached to the huge "golf ball".

The "golf ball", a giant space-age radar antenna is the receiver of an acquisition radar conceived by Bell Telephone Laboratories, which is being tested at White Sands Missile Range for the Army's Nike-Zeus anti-missile. Goodyear Aircraft Co. of Akron, O., is responsible for much of the detailed structural design of this gigantic receiver.

Bell Labs explains that, as with all search antennas, this acquisition radar receiver is designed to rotate constantly, to search the skies and spot "targets" (enemy missiles).

But what about the strange and unusual world created by the "merry-go-round"? What makes a seemingly uncomplicated electronic equipment room so complicated?

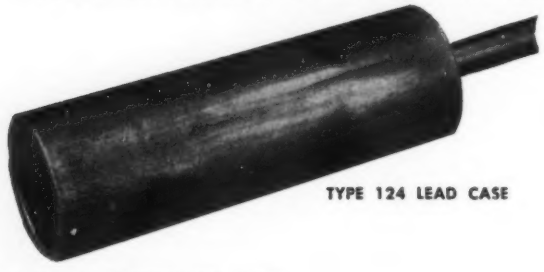
The answers to these questions come from the radar technicians who must actually ride this high-speed spinning wheel. They say it can be the "craziest" trip in the world.

No antenna will operate forever without maintenance; so, when replacement of certain essential compo-

CEECO

CEECO TYPE C124
LEAD CASE ASSEMBLIES
FOR AERIAL (STRAND) MOUNTING
CONTAINING FOUR TO SEVENTY-SIX UNITS

CEECO



TYPE 124 LEAD CASE

- LEAD STUB ASSEMBLIES ARE PRESSURIZED
- PLASTIC STUB ASSEMBLIES ARE SEALED IN THERMOPLASTIC COMPOUND TO INSURE PROTECTION FROM MOISTURE.

THESE ASSEMBLIES CAN BE EQUIPPED WITH LOADING COILS, CAPACITORS, SATURABLE INDUCTORS, AND MF UNITS.

WRITE US FOR ASSISTANCE ON YOUR LOADING AND TRANSMISSION PROBLEMS.

CEECO PRODUCTS ARE SOLD BY YOUR TELEPHONE EQUIPMENT SUPPLIER.

COMMUNICATION EQUIPMENT & ENGINEERING CO.

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nents is required (lights in a control room away from the antenna indicate when a component is ready to be changed), the radar men hop aboard the endlessly rotating equipment room. From this point, they are in a strange world.

A man can be dizzy, drowsy, depressed, indifferent; experience muscular fatigue, reduced visual acuity, sweating, pallor, false impressions of position and have trouble walking straight. It is something medical men call "high-stress environment", and even the healthiest individual can be affected.

When a person faces a constant rotation of 5 revolutions per minute or more, he encounters this environment. The "merry-go-round" not only hits 5 rpm, but under normal operation, whips around at 10 rpm.

What happens then? The problem involves the eyes, ears and muscle-sensing system that gives a man data concerning motion, direction and distance.

Because a technician cannot see himself spinning while inside this windowless room, his eyes naturally tell him he's not moving. But his nervous sensors—the labyrinths of the inner ear—know he's whirling. Over-stimulation of these labyrinths versus no stimulation of the eyes produces a conflict of data, and the brain doesn't know which to believe.

The technicians, who may encounter this bizarre array of symptoms called "canal sickness", will be the first to admit it is a confusing experience.

And, along with the speed of the antenna, and the effects of high-speed rotation on human nerve sensors, there is an additional force—called coriolis —which comes into play.

Coriolis is that force which accelerates one away from his intended straight path when he moves in a rotating environment. For example, if he extends his arm to operate a control, his hand might miss the target by several inches. It can be like trying to install a light bulb in a jumping socket.

Human-factors problems such as these are typical of the demands of space-age engineering. Studies at Bell Labs and elsewhere are underway to solve man's inevitable problems in a rotating environment.

At many of the other labs, these studies relate particularly to disorientation encountered by astronauts tumbling in space craft and manned satellites and space stations.

Tests measuring physical and psychophysiological performance of individuals have been conducted at various rotational speeds. Indications at White Sands show that reactions after a trip on the "merry-go-round" vary, and the time of reasonable tolerance to exposure varies from 5 to 30 minutes.

Consequently, technicians are chosen for this work on the basis of careful tests and observations of previous performance. An orientation program for all technicians is being proposed by Bell Labs engineers in charge of testing the antenna.

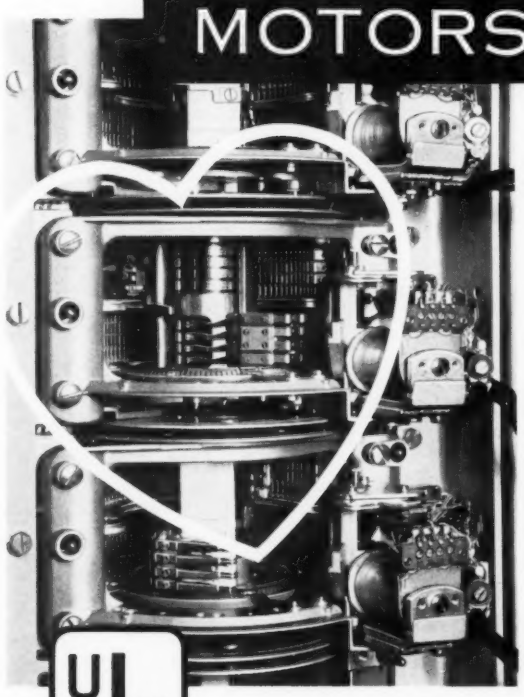
As nearly as is possible in the design of a research prototype, the "strange" world of the "merry-go-round" was foreseen in the design of the White Sands receiver.

For example, all of the electronic units in this equipment room contain ultra-reliable components to keep maintenance at a minimum, and are designed for quick replacement to minimize the time and effort required of the technicians.

Also, Bell Labs suggests, within the "merry-go-round", it may be possible to build an electromechanical device that will allow an individual to feel that he is standing still when actually he is rotating.

### Application Gives Value

"The individual who is best prepared for any occupation is the one

MOTORSWITCH

by USI

. . . Heart of the Central Office

The use of the USI Motorswitch enables central offices to combine the simplicity of step-by-step with superior speed and flexibility of common control!

- **High Stepping Speed** — 160 contacts per second (compared to 30 or 40 on stepping switches.)
- **Variable Availability** — Means economy through fewer trunks, greater trunk usage.
- **Precious-Metal Contacts** — Palladium-silver (compared to base metal) provides least contact resistance, maximum reliability in talking paths.
- **Solderless Bank Contact Strips** — Reduce soldering connections by 90% . . . increase reliability . . . simplify regrading . . . reduce number of grading and level hunting switches.

UNITED STATES INSTRUMENT CORPORATION

CHARLOTTESVILLE, VIRGINIA

# LOCATE HIDDEN DECAY AND LENGTHEN POLE LIFE

## OSMOSE INSPECTORS DIG FOR THE ANSWER

**Regardless of species or original treatment, every older in-place pole is a prime target for groundline decay. Records prove it. And there's no short cut to inspection. It's literally a case of digging for answers. The first 18 inches will quickly tell the story to experienced OSMOSE Inspectors.**

**Inspection without treatment merely observes decay as it progresses. Often enough, such methods actually encourage decay. The OSMOSE method not only locates decay, but halts and prevents it. This is the big difference between common "inspection-only" practices and the OSMOSE Inspection and Treatment method.**

**Hundreds of utilities know that the OSMOSE way is the only sure, safe way to keep older poles standing for many more years of trouble-free service. And the cost is remarkably low. Actual field reports show that the OSMOSE Inspection and Treatment Program can pay for itself if only 3 to 6% of your older poles can be saved from becoming "rejects". Get all the money-saving facts, write: Osmose Wood Preserving Co. of America, Inc., 976 Ellicott St., Buffalo 9, N.Y.**

OSMOSE

SERVING UTILITIES SINCE 1935


whose intelligence has been so well trained that he is able to adapt himself to any situation, and whose point of view has been so humanized by his education that he will be a good person in any job or calling. These qualities are the result only of a liberalizing education."—MORTIMER SMITH.

## GD/T Announces Promotions In Advertising/PR Department

Raymond P. Weis has been named advertising manager, George B. Forbes manager of news information, and Jacques S. Herman, manager of commercial and government publications, for General Dynamics/Telecommunication. These promotions, implementing the increased responsibilities within the department, were announced by Frederic W. Haupt, director of advertising and public relations.

**R. P. WEIS**

Mr. Weis has been assistant advertising manager for the last six years, with emphasis on directing the sales promotion activities and the national trade conventions in the communication field.

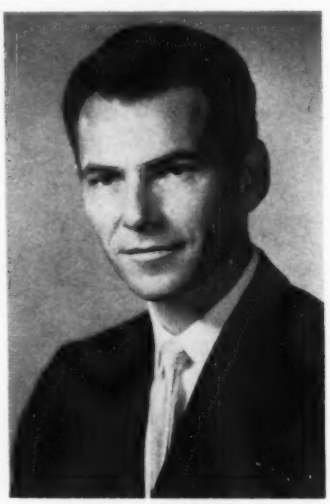
For more than 30 years he had been associated with advertising as an agency executive. His last position, before joining Stromberg-Carlson in 1953, was vice president of the Hutchins Advertising Agency in Rochester, N.Y. He is co-author of text materials widely used in advertising courses at the college level.

Mr. Forbes joined Stromberg-Carlson in 1942, working first in the drafting room as supervisor of a classified government project. In 1945 he became a member of the group investigating and later installing a system of machine tabulation for the control of inventory and production.

In 1947 he joined the advertising department as catalog editor; later this position was broadened to include all commercial publications. Most recently he has been editor of external publications. The new post will continue to include external house organs and will add new responsibilities in the area of public relations.

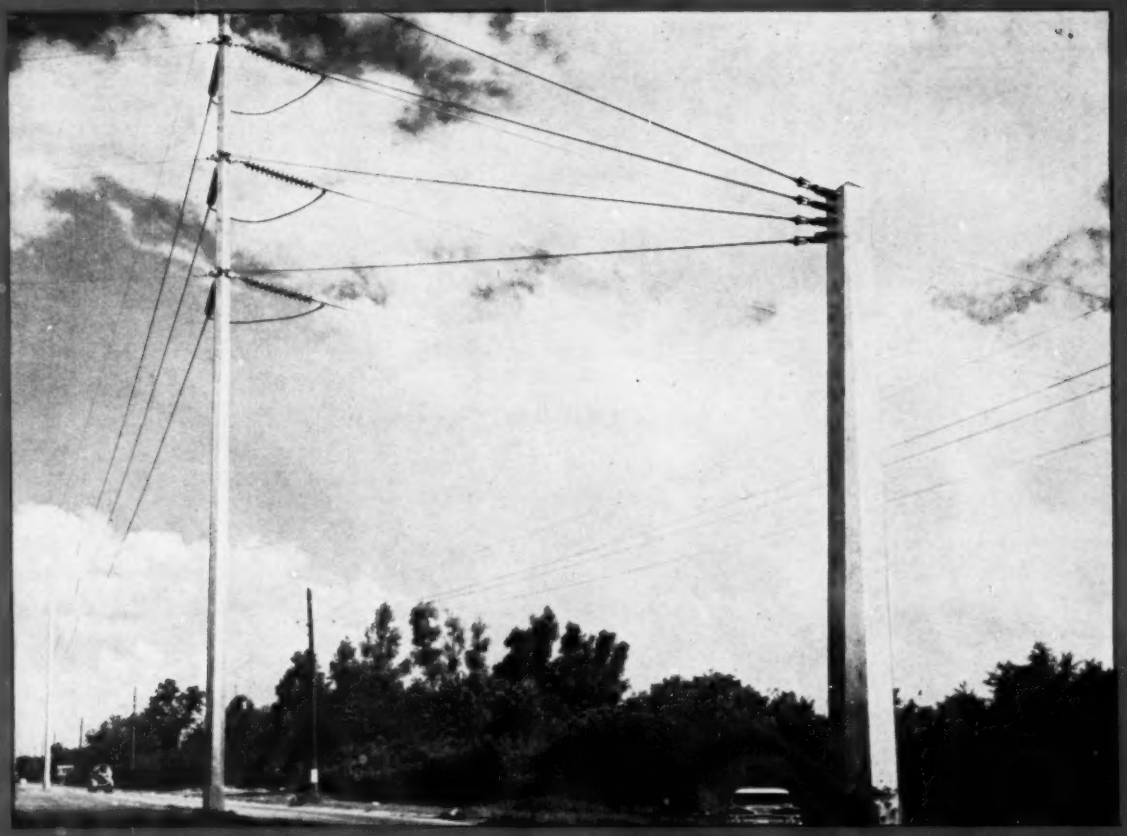
**G. B. FORBES**

A graduate of Yale University and Harvard (M.A.), Mr. Forbes had spent several years in the teaching field, and has continued as a member of the part-time faculty at the University of Rochester and presently at Rochester Institute of Technology.

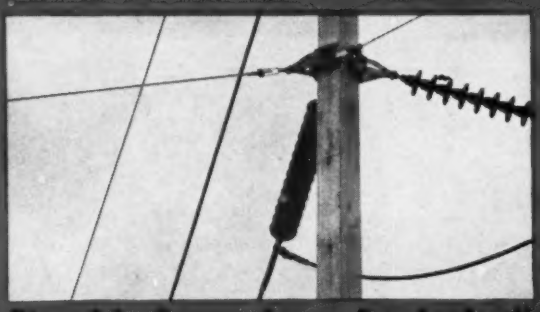


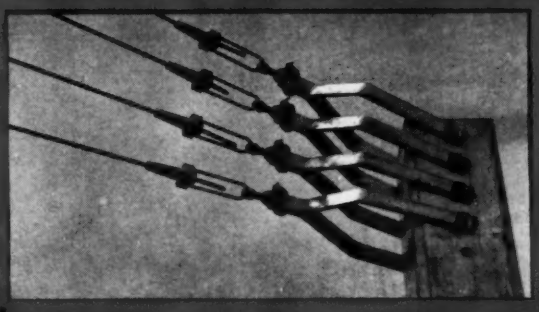
**J. S. HERMAN**

Mr. Herman joined Stromberg-Carlson in 1954 to set up a technical writing group to prepare literature covering equipment delivered on government contracts. This group later assumed responsibility for the preparation of all technical manuals, government and commercial. In the present re-alignment of departmental duties, Mr. Herman's group will prepare sales as well as technical literature, catalogs,



**This new 115 KV distribution line was designed to withstand hurricane force**





**Strandvise® was chosen for deadending because...**

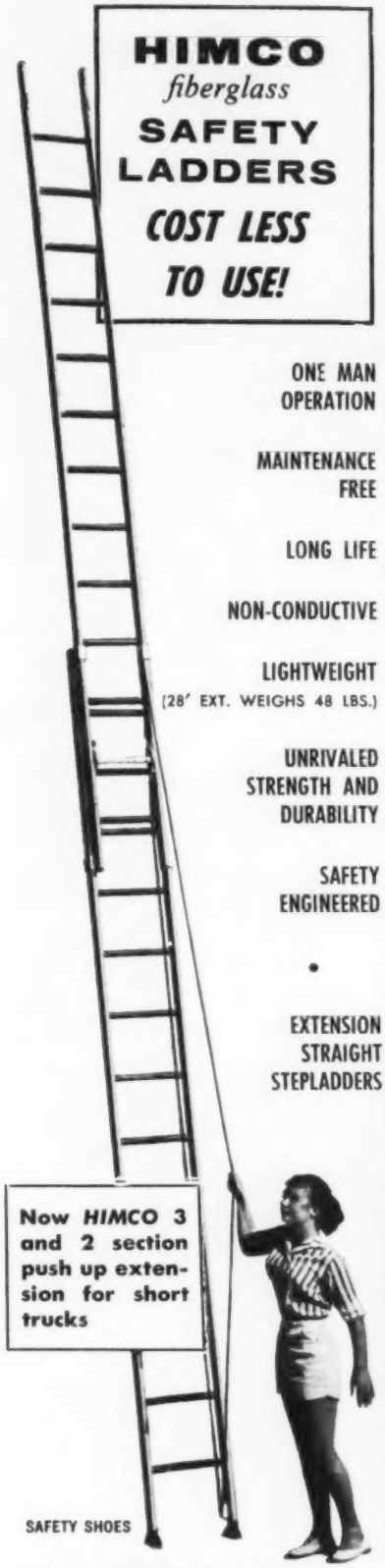
But let us brief you first: When the Louisiana Power & Light Company had to plan an aesthetically agreeable aerial primary or "go underground", the result was this 115 KV distribution line along General De Gaulle Drive in New Orleans, La. Specifications were for 1468 MCM ACSR, 7/16" EHS galvanized strand, 85' octagonal aluminum poles . . . and Strandvise. The straps tying Strandvise to the poles were especially designed for use with Strandvise. "Convenience of application, ease of installation and appearance" were the reasons given for specifying Strandvise.

When progressive planning becomes reality in the Power and Telephone Industries, chances are that one or more of Reliable's products will be there.

Reliable

*A Symbol of Integrity Since 1909*

**RELIABLE ELECTRIC COMPANY** **Franklin Park, Ill.**




for HIMCO standard fiberglass ladders and catalog write: HIMCO
P. O. BOX 54
SAN RAFAEL, CALIF.


government spare parts provisioning and assist with technical proposals.

He had previously been in the technical writing group of the U. S. Army Signal Corps at Ft. Monmouth, N. J., specializing in wire communications. He attended New York University, in the School of Education, and during service with the Navy in World War II taught classes in ordnance equipment for aircraft.

## Supa Insulations Dedicates New North Carolina Plant

Supa Insulations, Inc., Rocky Mount, N.C., was dedicated on Nov. 10, marking its entry into full production. A subsidiary of Superior Cable Corp. of Hickory, N.C., the new plant has a manufacturing area of more than 18,000 square feet.

Supa Insulations, Inc. manufactures insulated wire and cable for communications, signal and control systems; coaxial cable for community and closed circuit TV systems, and is one of the few plants in the Southeast with specially designed extrusion equipment capable of high speed production of wire and cable insulated with DuPont Teflon polytetrafluoroethylene resin.

William R. Henderson of the North Carolina Department of Conservation and Development, officiated at the formal opening ceremonies.

Mayor Allan C. Mims of Rocky Mount presented the city's welcoming greetings and included the new facility among recent industrial additions, which have boosted the city's annual payroll by 1.6 million dollars in the past 18 months.

James L. Robb, president of Superior Cable Corp., presided at a luncheon which followed a tour of the plant by Rocky Mount industrial and business leaders.

Other Superior Cable officials attending the dedication included H. Walker Geitner, chairman of the board; Vice President Gordon C. Rollins, and the following company directors: Malcolm C. Wehrung of Washington, D.C.; Glenn E. Anderson of Raleigh, N.C., and Dr. E. M. Schoenborn of Raleigh, N. C.

## New Sales Program Announced By Safety Tower Ladder

Safety Tower Ladder Division has recently adopted a new sales program, which includes a new product name, a new corporate identification, the establishment of a sales representative program throughout the nation, and a move to new quarters.

The company, now identified as Safety Tower Ladder Division of Air Space Devices, Inc., moved recently from Burbank to offices and manufacturing facilities at 5428 Vineland Ave., North Hollywood, Cal.

The product, a ladder climbing safety device, (previously known as "Notch-lok") is now being called "Saf-T-Climb." The three parts of Saf-T-Climb have also been named, for the first time, to make ordering easier.

The galvanized steel rail that attaches to permanent rung or peg step ladders will be called "Saf-T-Notch Rail," referring to the notches every six inches in the rail, which are claimed to prevent a climber who

**William R. Henderson of the North Carolina Department of Conservation & Development performs the ribbon-cutting at the official dedication of Supa Insulations, Inc., at Rocky Mount, N.C. Left to Right: N. C. Cox, sales representative, Superior Cable Corp.; William Johnson, local plant manager; H. Walker Geitner, chairman of the board, Superior Cable Corp.; James L. Robb, president of Superior Cable; Hugh Sawyer, vice president of the Rocky Mount Chamber of Commerce; and Gordon C. Rollins, vice president in charge of manufacturing, Superior Cable Corp.**

slips from falling more than that distance.

A manganese bronze sleeve glides up and down the rail, but is said to lock automatically in one of the notches if a man slips; and it has been named the "Saf-T-Lok Sleeve." The safety belt which a climber wears and attaches to the sleeve has been titled, "Saf-T-Belt." The recent addition of ½ inch wings on the safety snaps of the sleeve allows a gloved worker to attach his belt without removing his gloves.

A new trademark design has served to highlight all these changes.

Informative new materials about "Saf-T-Climb" will soon be available, the company states, including a new brochure, a color slide film presentation and a 10-minute color movie.

Starting the first of the year, Safety Tower Ladder Division also plans to inaugurate a national representation and sales program to widely varying markets through regional manufacturer's representatives. Previous to this, Saf-T-Climb was sold primarily on a factory-direct basis.

## Ullrich Appointed South Zone Sales Manager for Onan

Appointment of George Ullrich Jr., formerly with Harrison Equipment Co., Onan distributor in Houston, Tex., to zone sales manager for the Onan

**GEORGE ULLRICH JR.**

Division of Studebaker-Packard Corp. has been announced by Roy Mullin, vice president-marketing.

As zone manager, Mr. Ullrich will assume responsibilities for sales of all Onan products in a territory covering most of Texas and Mississippi and all of Louisiana. He will work closely with Onan distributors, dealers, O.E.M. and special accounts in the territory.

Mr. Ullrich has a background of experience working with electrical equipment and a long association with industry personnel in his territory.


A Stronger Heart for Your Paging and Signaling System

NEW BUDELMAN TRANSMITTER

Type B-250-VA4

*Built for Years of Round-the-Clock Continuous Duty Service*

With over 40 now in use as Bell System Radio base stations, these 25-50 mc central office transmitters deliver MAXIMUM SIGNAL COVERAGE in 1-way voice radio paging or tone signaling, because of their 250-watt carrier power and 100% modulation (for peak power of 1000 watts.) Over-modulation is prevented and sideband radiation, suppressed through the use of feedback, speech clipper and low-pass audio filter.

Designed well above FCC requirements, reliability and frequency stability are assured. Highest grade components are operated greatly below continuous duty ratings. Advanced engineering provides high efficiency and negligible spurious radiation.

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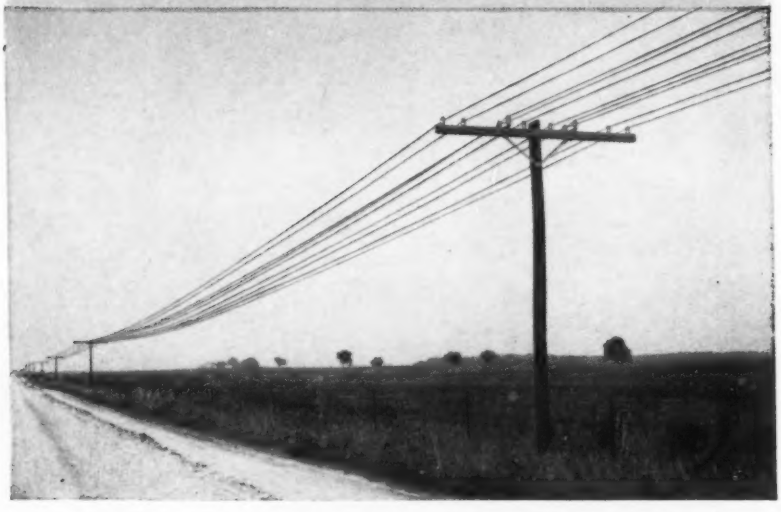
# *Crapo* HTL-135

## High Tensile Line Wire

## MADE TO WITHSTAND HEAVY STORM LOADS

Time and time again, *Crapo* HTL-135 has demonstrated its ability to stand up under heavy ice and wind loads when other conductors failed. This can be attributed to the fact that *Crapo* HTL-135 combines high strength with high fatigue endurance plus superior elastic qualities which enable it to spring back into place when loads are removed. The result: service interruptions are minimized, re-sagging is seldom necessary, where this rugged telephone wire is used.

The excellent telephonic transmission characteristics of *Crapo* HTL-135 make practical subscriber loops of 14 to 15 miles with normal voltages and equipment. Longer loops are possible where higher voltages and more sensitive telephone sets are employed. For dependable, long-span, low cost rural lines, specify *Crapo* HTL-135.



## HERE'S PROOF OF DEPENDABILITY

The **Crapo** HTL-135 in this typical rural line of 300-foot spans was subjected to two heavy ice storms within 14 months. This photo shows the line, without resagging, three months after the second storm.

**Write for Manual TM-59** containing complete engineering data!

Crapo HTL-135

INDIANA STEEL & WIRE CO., INC.
Muncie, Indiana


## C. P. Durnovo Joins A.E.I. As Senior Telecom Engineer

Cyril P. Durnovo has been named a senior telecommunications engineer for Automatic Electric International. Working out of Geneva, Switzerland, Mr. Durnovo will handle communications engineering problems throughout Africa, Europe, and the Middle East.

C. P. DURNOVO

Before joining AEI, he was product manager for tropospheric scatter systems with Adler Electronics, Inc., New Rochelle, N.Y. Previously, he travelled in Europe and Latin America, handling sales and engineering assignments for International Telephone & Telegraph, U.S. State Department, and L. M. Ericsson.

Mr. Durnovo did his undergraduate work in France, where he received degrees in electrical and mechanical engineering after attending Ecole d'Electrique et Mecanique Industrielles, Paris. He has also attended the University of the State of New York, New York City, and did graduate work at Brooklyn Polytechnic Institute.

Experienced in tropospheric scatter communications Mr. Durnovo has lectured on the subject, and has had a number of papers published.

He is a member of AIEE, IRE, AFCEA, Society of French Electrical Engineers, and holds a professional engineer's license from the state of New York.

## GD/T, CEECO Conduct West Coast Transmission Seminar

Twenty-six men representing West Coast Independent Companies attended a recent transmission seminar in Millbrae, Cal. Conducted by General Dynamics/Telecommunication, and the Communication Equipment & Engineering Co., the seminar demonstrated the close affinity between cable sizes,

# IT'S YOUR CHOICE...

## Pick the Distribution Wire that suits you best

### MUTIPAIR FIGURE 8

Available in No. 19 or 22 AWG . . . Fully color coded . . . Choice of .109" or .134" messenger.

### SINGLE PAIR FIGURE 8

Available in No. 19 AWG . . . One leg of twisted pair has white stripe for identification . . . Choice of .083", .109" or .134" messenger.

Whatever your requirements in Distribution Wire may be, Whitney Blake can provide you with a high quality product that will meet your specific needs.

WRITE for new bulletin on the Distribution Wire of your choice.

Bulletin T-6 . . . . Jacketed Pair

Bulletin T-8 . . . . Multipair and Single Pair Figure 8

### JACKETED PAIR

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**Exploring Coil**
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**A New, Different, Improved Amplifier** in ultra small size. This new transistor amplifier is the newest development, superseding our well known Model E Amplifier.

**High Gain**—Signal gain with proper impedance match, 200 to 400 times input signal. Gain 2 to 3 times that of Model E. Gain is adjustable by knob.

**Very Small**—One fourth the size and weight of Model E and uses only four Size Z penlights.

**Rugged—Strong**—Case of molded Bakelite. Receiver plug when removed from jack turns battery off.

Simply plug exploring coil and receiver into amplifier and adjust signal to comfortable receiver level. Any receiver and pickup coil will give perfect results if impedance is between 40 and 100 ohms at resistance level.

**STEWART LOCATOR TESTER**

**MODEL A**—The complete Unit for locating grounds, shorts, wet spots and other faults in cables. In addition will locate and determine the depth of buried pipe or conductor. With fish-tail exploring coil, neutral pick-up coil and headphone.

**STEWART CABLE TESTER**

**MODEL L — SIMPLE TO USE. SAVES TIME.** More accurately locates cable faults. Also has "tone-test" features and fish-tail exploring coil and headphone.

**STEWART BROTHERS**
Division of Instrument Laboratories
315 W. WALTON PL., CHICAGO 10, ILL.

**Representatives from eight Independent telephone companies on the West Coast are shown at recent CEECO—General Dynamics/Telecommunication seminar at Millbrae, Cal.**

cable loading, and repeaters in any study of transmission problems.

R. A. Clark Jr., president, and K. C. Gillette, sales manager, of CEECO outlined the history of cable loading and discussed present theory in new applications of load coil.

Alec Whittaker, General Dynamics/Telecommunication transmission engineer, spoke about the flexibility of Stromberg-Carlson repeaters when used on loaded cable. He also pointed out the savings available, through use of smaller gauge wire, which often equal the entire cost of the repeater installation.

Independent representatives at the seminar included H. C. Bright, V. V. Lyman, R. D. Smith and Gayle Smith, all of California-Pacific Utilities Co., San Francisco, Cal.; Kenneth Adams, Raymond Adams and William Kenney of Dos Palos (Cal.) Telephone Co.; Gene Gomes and Robert Haven, both of Evans Telephone Co., Patterson, Cal.; Ronald Deaver, Moses Nunes and Sal Spina of Gilroy (Cal.) Telephone Co., and Thomas Plotts of Happy Valley Telephone Co., Anderson, Cal.

Also Roger Bergthold, Douglas Knowlton, Jack Poulson, Wesley Risley of Roseville (Cal.) Telephone Co.; R. L. Mallon and John Stevens of San Joaquin Telephone Co., Manteca, Cal., and Frank Bonacorsi, Frank Corbin, Wallace Freer, Ernest Galloway, Richard Nielsen, Raymond Patterson and Robert Wolfe, all of Western California Telephone Co., Los Gatos.

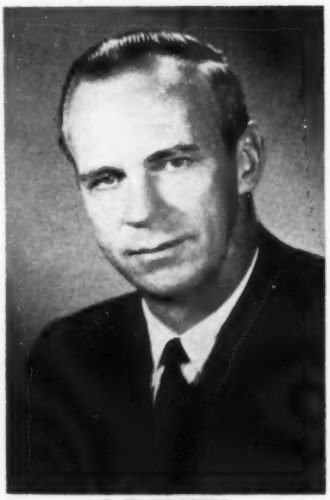
Two representatives from the Standard Oil Co. of Cal., W. M. Harris, and D. D. MacKenzie, also attended.

## USI Names Taylor to SW Post, Elmen to SE

John T. Robertson, vice president-marketing of United States Instrument Corp. has announced two appointments to the company's field force.

George C. Taylor has been named southwestern regional manager with offices in Dallas, Tex. Mr. Taylor, a native of Tulare, Cal., attended the University of Wisconsin and served in the U. S. Navy from 1942 to 1946. Beginning his career in the telephone business with Wisconsin Bell in 1947, Mr. Taylor has since served with W. T.

**G. C. TAYLOR**



**J. F. ELMEN**

King, Inc., Lansing, Mich., and ITT Kellogg. He also has owned and operated his own telephone company.

J. Fred Elmen has been appointed southeast sales engineer with offices

*(Continued on page 58)*

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**18 TOOLS**

**EVERY TOOL NECESSARY FOR ADJUSTING, CHECKING AND TROUBLE-SHOOTING RELAYS**

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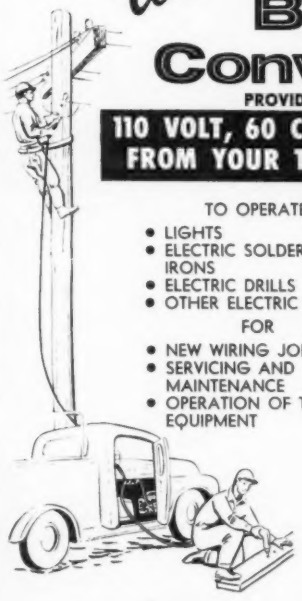

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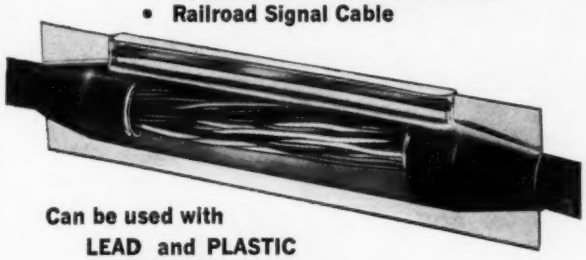
- **Traffic Control Cable**
- **Cathodic Protection Cable**
- **Co-axial and Video Pair Cable**
- **Railroad Signal Cable**



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**PAPER, PLASTIC, PULP and RUBBER CONDUCTOR INSULATION**

**Ideal for Aerial, Duct, Direct Earth Burial and Submerged Installations**

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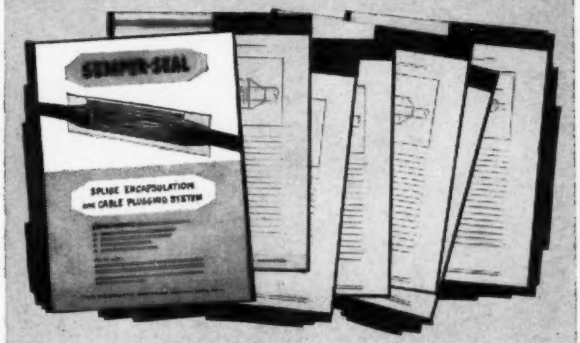


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9. Repetitive ringing . . . mobile ringing same as regular telephone
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11. Exclusive! Only mobile called can answer
12. Exclusive! Only mobile called can disconnect
13. Exclusive! Mobile units can be used with any standard de-coder device
14. Exclusive! Crystal filter circuitry . . . eliminates components, provides stability
15. Exclusive! Privacy feature—locks other units out when channel is in use
16. Exclusive! Converts from radio-telephone to 2-way radio . . . and vice versa
17. Exclusive! Choice of colors . . . control unit can be matched to car interior
18. Busy lamp in mobile . . . visual indication of circuit in use
19. Standard radio-store parts . . . no special components . . . means easier maintenance
20. Transistorized power supply . . . trouble-free, rugged design
21. Meets all FCC specifications and telephone industry standards

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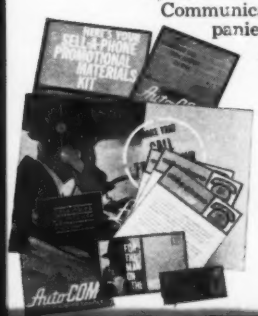


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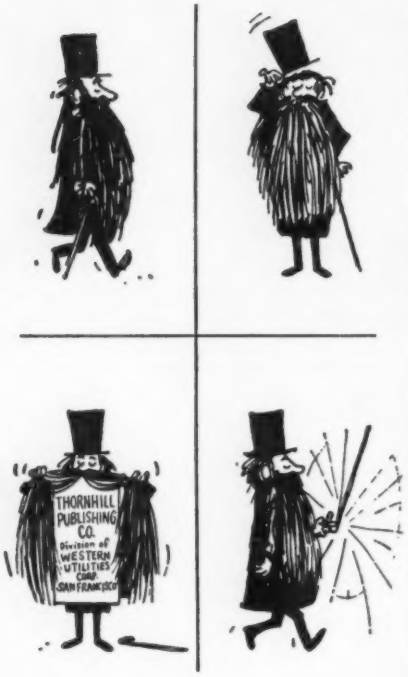


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All Capacitance Values Available to 4th Decimal, from .001 to .100.
Building-out capacitor stubs should be ordered on Supplies Requisition as follows: "MIDWEC Stub, Building-Out Capacitor, ____pairs equipped, ____feet of cable, ____mfd. capacitors, ____tolerance."

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in Atlanta, Ga. Mr. Elmen, a native of Bogota, N. J., is a graduate of Lafayette College. During the period 1942-1946, Mr. Elmen served as a lieutenant, Signal Corps, U. S. Army. Following the war, he joined Federal Telephone & Radio, then transferred to ITT Kellogg in 1952.

## Smith, Meadows Appointed Superior Cable Executives

James L. Robb, president of Superior Cable Corp., on Nov. 20, announced two executive appointments.

Warner T. Smith, formerly chief engineer, was elected vice president in charge of engineering; and Robert M. Meadows, formerly assistant treasurer, was named treasurer.

**W. T. SMITH**

Mr. Smith joined Superior Cable Corp. in June, 1960, having moved from the position of manager, Defense Activities, Anaconda Wire & Cable Co.; and after serving as assistant chief for staff engineering, telephone Engineering Division of the Rural Electrification Administration.

As chief engineer of Superior Cable Corp., he was responsible for development of all product lines in telephone wire and cable.

In his new position, Mr. Smith will also be responsible for product diversification. He will also direct research and development sections currently producing prototypes of new and advanced coaxial cable and other electronic wire and cable constructions for aircraft and missile applications.

A member of the American Institute of Electrical Engineers, Mr. Smith is a lieutenant colonel in the U. S. Marine Corps Reserve.

Mr. Meadows joined Superior Cable Corp. as chief accountant in 1958 and was appointed assistant treasurer in 1959.

As treasurer, he will continue to supervise all accounting procedures

**R. M. MEADOWS**

and will act as budget and finance comptroller.

A veteran of World War II, he served as a pilot with U. S. Air Force units based in Australia and took part in the Pacific campaign.

## Rohn Co. Announces Staff Promotions

The following promotions in staff personnel have been announced by Dwight Rohn, president of Rohn Mfg. Co., Peoria, Ill.

William Hall, assistant sales manager.

Grady Rooker, coordinator of sales department.

Donald Rohn to the position of assistant treasurer.

These positions are newly created with new responsibilities, caused by the new product lines for communications, governmental, microwave and broadcast tower users, according to Richard A. Kleine, Rohn sales manager.

## Junior Achievement Week

Jan. 28 to Feb. 4 is National Junior Achievement Week. As in the past, telephone companies across the nation are among those sponsoring JA companies.


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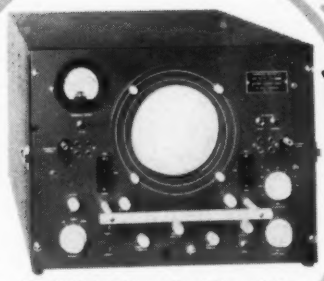

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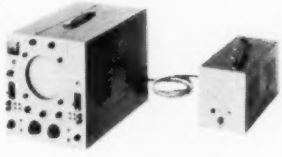
The TMS-0100 Swept-Band Transmission Measuring Set

## TMS-0101



TMS-0101, Field Unit with Separate Power Supply for Easier Portability

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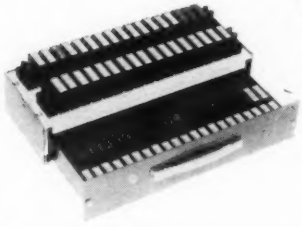
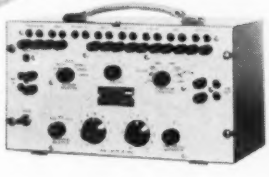


TLA-0100 Artificial Line shown with Storage Drawer open and Plug-In Modules in place

## THS-0100



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Hallamore designed **Swept-Band Transmission Measuring Set, Artificial Line,** and **Test Hybrid,** provide all the equipment any telephone company needs for fast, accurate, reliable, and economic voice-band circuit checkout to satisfy the most demanding conditions. Unprecedented requirements for good voice transmission circuits created by Direct Distance Dialing, and other modern communication developments, are more readily handled with the use of any one, or a combination, of the apparatus herein described.

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For **PLANT DEPARTMENT** the **TMS** makes it relatively simple to maintain maximum quality control in cable and circuit acceptance testing, as well as initial adjustment of central office equipment.

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The **TLA-0100 ARTIFICIAL LINE** enables the simulation of circuit characteristics existing in outside plant. Through specific design, maximum flexibility is obtained with respect to load distribution, cable characteristics, and termination. By means of plug-in modules containing various lengths of line section and load types, commonly used loading schemes (B88, D88, H88, M88) may be applied to any one or a combination of six types of cable. Load spacing and end sections may be adjusted in increments of 150 feet.

The **THS-0100 TEST HYBRID SET** incorporates the necessary transformers, balancing networks, access jacks, and switching, for performng all standard measurements of return loss and for adjustment of building-out capacitance or compensation on telephone cable circuits.

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## Shortest way to Short-proof splices...

## Nicopress Splice Separators...

Ideal combination for full-strength, short-proof splices in parallel and twisted-pair wires... Nicopress Sleeves and Nicopress Splice Separators.

Nicopress Splice Separators save time, save tape, eliminate need for staggering splices, provide neater splices, eliminate shorts. Linemen readily make full-strength equal-tension splices in both parallel and twisted-pair conductors with Nicopress Sleeves and Tools, then merely snap the high-dielectric Nicopress Separator between the two splices. Tape is easy to apply over the insulated splices.

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*The National Telephone Supply Company*

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